Technical Paper 47

Raw Materials in the United States Economy 1900-1977

U.S. Department of Commerce
BUREAU OF THE CENSUS

U.S. Department of Interior
BUREAU OF MINES

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CHAPTER 1.—Orientation and Definitions

Today, as throughout recorded history, availability of raw materials is one of the major concerns of mankind, of his governments, and of his relations with other nations. He devotes most of his time to supplying his physical needs for food, shelter, and communication. He expects his government to be concerned that he has an adequate supply of these things and to take necessary actions to maintain such a supply.

BACKGROUND OF THIS REPORT

In order to focus attention on the long-range rather than on the short-range materials situation, a President's Materials Policy Commission (PMPC) was established early in 1951 under the chairmanship of W. S. Paley. In June 1952, it issued the five-volume report, **Resources for Freedom**, which included a wealth of statistical, technological, and economic studies as background for the recommendations of the Commission.

Among the statistical materials developed in this Paley report were measures of raw materials production, consumption, and net exports for each year of the period 1900-1950. The measures represented the aggregate value of raw materials at the point of production in terms of constant 1935-1939 dollars. Separate totals were shown for 19 major groups or subgroups of raw materials, with further details shown for 20 metallic minerals and 7 energy sources.

The Bureau of the Census was asked by the Executive Director of the Paley Commission to take the responsibility of keeping these measures up to date and revising them when necessary. Requests were also received for gross figures on imports and exports of raw materials.

As a consequence of these requests, in 1954, the Bureau of the Census Working Paper No. 1, **Raw Materials in the United States Economy: 1900-1952**, by Vivian Eberle Spencer of the Bureau of the Census and Charles A. R. Wardwell of the Office of Business Economics was issued as a preliminary report. This report included revised annual production and consumption measures similar to those constructed for the Commission. These measures covered the period 1900-1950 and were more precise and somewhat more comprehensive than the earlier statistics. In addition, this report presented comparable 1951 and 1952 figures. Gross imports and exports were shown for the first time. As before, raw materials were classified by the industry in which they are primarily produced, but the report also presented a new classification of raw materials on the basis of the major purposes for which they are used: For foods, energy materials, or physical-structure materials. Another feature, available for the first time in this report, was annual price series at the raw-materials level, which were constructed on a basis comparable to the consumption series. Many analytical tables and considerable background material intended to orient the significance of these basic raw materials figures were also presented.

In 1963, Bureau of the Census Working Paper No. 6, **Raw Materials in the United States Economy: 1900-1961**, by Vivian Eberle Spencer of the Bureau of the Census, was published. In this report the basic statistical series were extended to cover the years 1953 through 1961. This report benefitted from the availability of (1) the 1954 Census of Mineral Industries to yield a more up-to-date weight base and (2) the U.S. Department of Agriculture's new measures of supply and utilization of farm commodities to give more precise agriculture figures and to eliminate some inherent duplications in the original series. This report also included, in Appendices A and B, details on production, imports, exports, consumption, and price measures for more detailed groups of commodities. The broad group series for production, imports, exports, and consumption were presented both in terms of 1954 and 1935-1939 average dollars. While the price series were shown on a 1954 index base, they had been revised to use changing consumption weight bases for the four periods: 1905-1909, 1920-1924, 1935-1939, and 1950-1954.

In 1969, Working Paper No. 30, **Raw Materials in the United States Economy: 1900-1966**, by the same author was published jointly by the Bureau of Mines and the Bureau of the Census. The most significant new contributions in this report were (1) the complete basic series for 1962-1966; (2) the presentation of consumption rather than "apparent consumption" for minerals, by the introduction, insofar as possible, of stock adjustments in the minerals consumption statistics; (3) the inclusion throughout of the economic statistics figures from the 1963 Censuses of Mineral Industries and Manufactures; and (4) the extension of the series to more completely cover Alaska and Hawaii.

In 1972, Working Paper No. 35, **Raw Materials in the United States Economy: 1900-1969**, by the same author was issued jointly by the Bureau of Mines and the Bureau of the Census. The major contributions of this report were presentation of the production, import, export, and consumption series in terms of 1967 dollars; introduction of the weight base 1965-1969 for the last 11 years of the price indexes; and extension of the series to cover 1967, 1968, and 1969.

The present report adds to this series of studies information on the very notable and rapidly changing raw materials patterns of the first 8 years of the 1970's. In this period we see some of

the most significant shifts in production, import, export, and price patterns that have occurred in the last quarter century. The basic quantity series are presented in terms of 1972 constant dollars. For the price series, the index base is 1972. The basic production and consumption series have been extended to include direct energy (hydro, geothermal, wind, and solar). They were also extended to include horses and mules, and the feed for them which was quite significant in the early years of this century, and to include energy from uranium which became significant in the last decade. More firmly grounded series have been developed for fishery and wildlife products. For the first time, price indexes for these items have been included, although only for the later years. The basic production, imports, exports, consumption, and price series are presented in a manner exactly comparable to that used in the more recent reports of this series. However, new methods of analysis are also included, and new, revised, or improved series from government and private organizations are made use of.

Chart 1 shows, for the period 1970-1977, the composition by source of the raw materials consumption series. Although the classes oil and gas and meat animals account for 50 percent of the total consumption in this period, the remaining 26 classes of products shown indicate considerable diversification, with 19 of them amounting to between 1 and 4 billion dollars. To what extent do we really need the two dominant classes? How do we get them? How could we substitute a variety of other classes for them? The present report gives only the background of what we have done in the 20th Century, and the trends in the direction in which we seem to be going now.

DEFINITIONS OF TERMS

"Raw materials" as the term is used in this study refers to the products of the primary stage of production. Thus iron ore is a raw material while pig iron is a semifabricated product. Similarly, sawlogs and pulpwood are raw materials while lumber and wood pulp are semifabricated materials.

The "raw materials industries" are those which perform the first step of extracting natural resources in crude or semicrude form. They include farming, forestry and logging, fishing and trapping, and the development and operation of mines, quarries, and wells, together with the concentration or preparation of crude minerals which is usually performed before they are marketed. The processing of food products is excluded, such as canning, flour milling, or meatpacking; also excluded is the production of woodpulp, the making of finished lumber products, the conversion of mineral fuels in petroleum refineries and coke ovens, the smelting of metallic ores, and the production of cement or lime from limestone.

Raw materials consumption is derived as production plus imports minus exports of raw materials, adjusted for changes in stocks wherever possible. Such stock adjustments have been made for the types of farm commodities produced in the United States for the period 1924-1977 and for most mineral commodities for which stock changes are significant. Where adequate stock series were not available, "apparent consumption" was used, treating raw materials as though they were consumed in the same year as that in which they were produced or imported. For such materials, actual consumption is overstated for a year in which raw materials inventories are being accumulated and understated for a year in which these inventories are being liquidated.

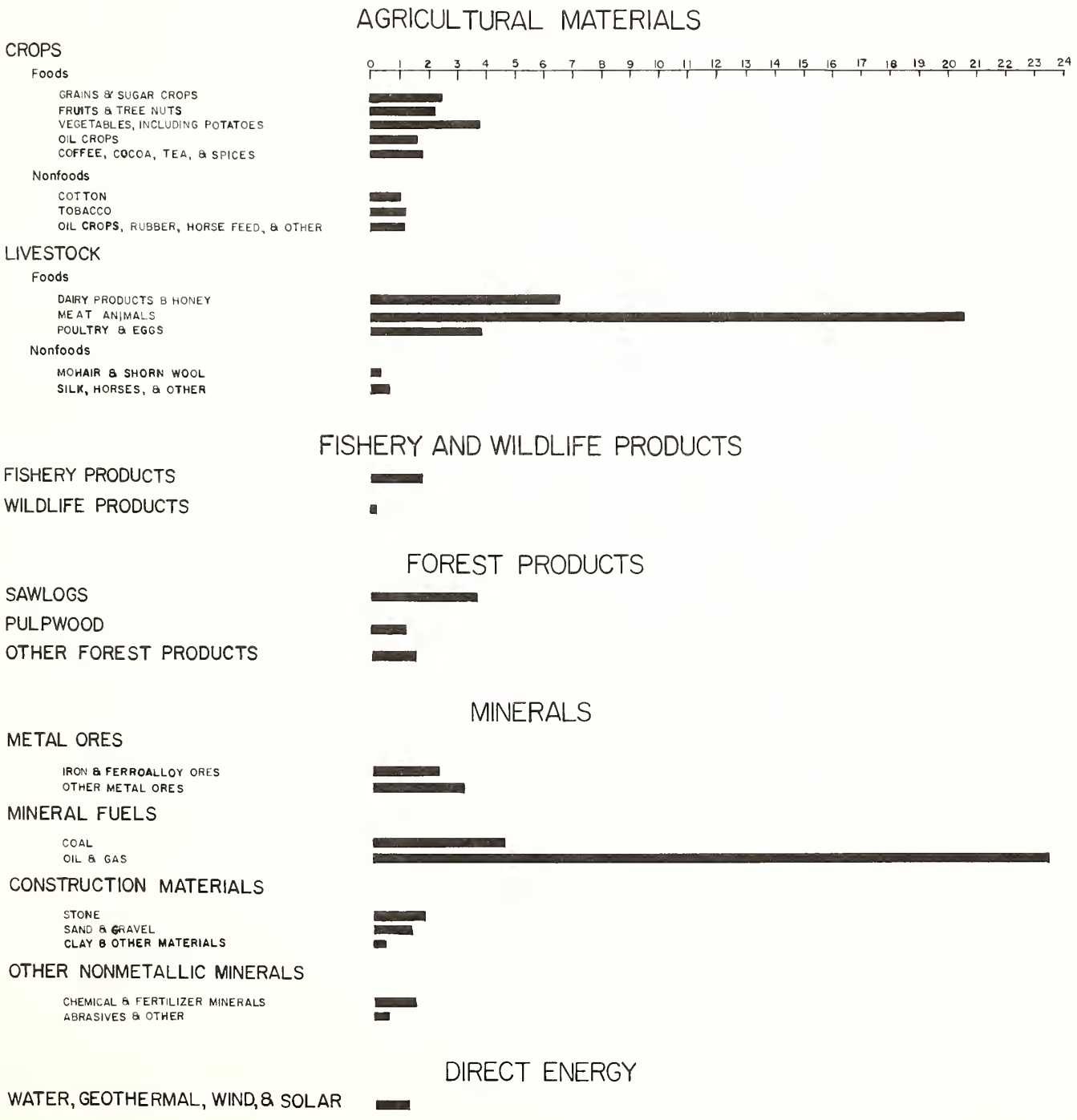
The raw materials consumption figures approximate raw materials requirements for the end-use products consumed in the United States in the given year. The raw materials equivalents of imported, or exported, semifabricated and fabricated products were estimated and included, insofar as feasible. Such estimates affected the results most significantly for certain metallic materials, chemical materials, and forest products.

The consumption figures for each year represent first consumption in the United States; figures for consumption of domestic scrap are not included in the basic series.

The specific raw materials included under each classification are indicated in the text of Appendix A and in Tables B2 and B3 of Appendix B. See also Chart 1.

CHART I.- RAW MATERIALS CONSUMPTION IN THE UNITED STATES, BY DETAILED SOURCE GROUPS: AVERAGE 1970-1977

(In billions of 1972 dollars)



CHAPTER 2.—Uses, Sources, and Prices of Raw Materials

The tremendous technological developments of the 20th Century are associated with significant changes in the uses and sources of raw materials. Some of these changes reflect changing user preferences for particular materials or products, but perhaps to a greater extent they reflect changes in availability of particular commodities and demands for specific physical characteristics to fit the requirements of now technologies.

BROAD USE CLASSES

It is fruitful to divide raw materials into three broad use classes: **Food** for human beings, **energy** materials which supply warmth and provide motive power for our devices, and materials which make up the **physical structure** of the things we make and use. The food group includes both agricultural foods, produced on farms and ranches, and fishery food products. Energy materials cover the fuel uses of coal, oil, gas, wood, and uranium; direct energy supplied by falling water, wind, sun, and geothermal processes; and feed for horses and mules. All other raw materials are included in the physical-structure materials group.

Foods have accounted for about one-half of our raw materials use throughout the century (see Table 1). In the last decade (as also in the 1910-1919 period) this ratio was only 47 percent. Whereas, in the great depression of 1930-1935 it rose to 56 percent. But in most of the rest of the century it remained between 48 and 51 percent.

In contrast, the portion of our raw materials used for energy has increased in each succeeding 5-year period since 1940, from 22.9 percent of all raw materials in 1940-1944 to 29.7 for the 1975-1977 period.

Much of this century, physical-structure materials have constituted about one-fourth of all raw materials used. However, this ratio fell to 22.8 percent for 1975-1977 and in the depression period of 1930-1934 it dropped to 20.2 percent. In the first two decades of the century the ratio was somewhat higher, with a peak of 29.6 percent in 1905-1909.

Per capita consumption figures by broad use classes are shown in Table 2. Chart 2 provides a comparison of data for population and consumption of raw materials by use classes. The smallness of the change in consumption per capita for all raw materials is somewhat surprising. In 1906, per capita consumption of all raw materials had already reached $412 per year, a figure not exceeded until 1942. After 1947, this figure was exceeded again only once until 1964. Since that time this ratio has been increasing. The peak of $454 was attained in 1977, reflecting primarily a large increase in demand for energy materials in recent years.

Food consumption per capita reached a peak for recent years in 1976 of over $214 per person. The only previous time when as high a ratio is shown is at the end of World War II (1944-1946) when some foods used for relief purposes probably were included in the consumption figures. Per capita consumption of physical-structure materials was slightly lower ($106)

Table 1. Foods, Energy Materials, and Physical-Structure Materials as Percents of All Raw Materials Consumed in the United States: 1900 to 1977

Period	Foods	Energy materials	Physical-structure materials	Period	Foods	Energy materials	Physical-structure materials
1975-1977....	47.5	29.7	22.8	1935-1939....	52.7	23.7	23.5
1970-1974....	47.0	28.8	24.2	1930-1934....	56.1	23.7	20.2
1965-1969....	48.0	26.2	25.9	1925-1929....	48.9	24.3	26.7
1960-1964....	50.3	24.7	24.9	1920-1924....	49.2	25.6	25.2
1955-1959....	50.0	24.2	25.8	1915-1919....	46.0	25.9	28.1
1950-1954....	49.5	23.8	26.7	1910-1914....	47.4	24.0	28.6
1945-1949....	51.4	23.5	25.1	1905-1909....	47.8	22.6	29.6
1940-1944....	50.6	22.9	26.5	1900-1904....	49.6	21.5	28.8

Source: Based on table A5.

in 1977 than in 1900 ($108). This ratio was highest ($125) in 1906 and lowest ($61) in 1933 and 1934. For per capita energy consumption there have been much more striking changes over the nearly 8 decades of the series. The peak per capita consumption of $136 in 1977 was 74 percent higher than the $78 of 1900. Moreover, the increase in the last decade alone was 22 percent. Energy ratios have shown consistent increases throughout most of the century, if we disregard depression and war periods. For a discussion of the composition of these ratios, by more detailed classes see Chapters 5, 6, and 7.

The trends in per capita consumption can be better analized from the decade figures shown on page 7 for the highest rate of consumption, the lowest rate of consumption, and the decade average annual consumption. Comparison of the high and low rates for each decade gives a measure of the stability of the average rate if such rates are used to project requirements for other periods.

Table 2. Population and Per Capita Consumption of Raw Materials in the United States, by Broad Use Classes: 1900 to 1977

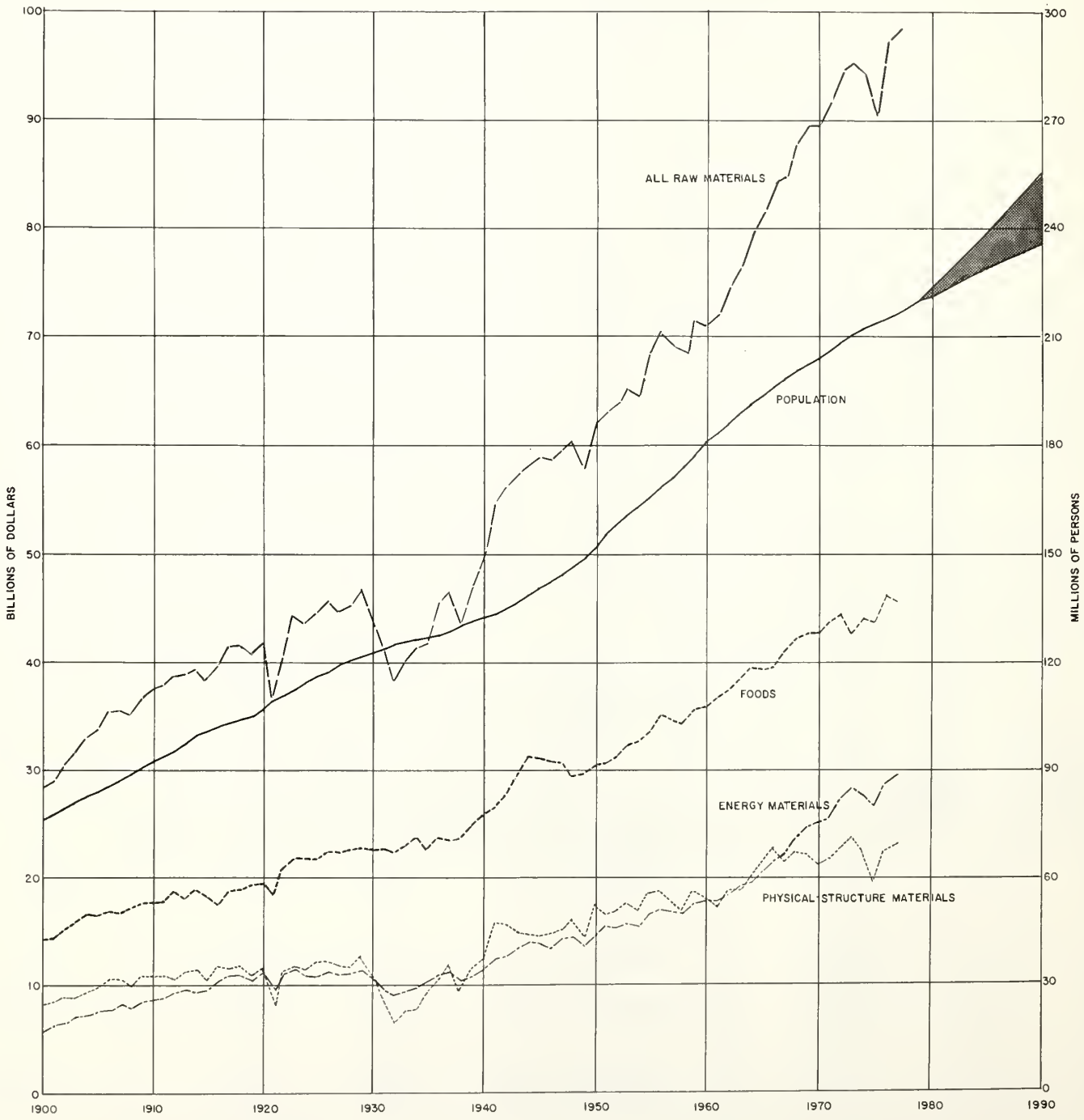
(Money figures in constant 1972 dollars)

Year	Population (millions)	Per capita consumption (dollars) of-- All raw materials	Foods	Energy materials	Physical-structure materials
1977	216.8	453.8	211.5	136.0	106.3
1976	215.1	451.7	214.5	133.7	103.5
1975	213.6	423.6	205.5	125.5	92.5
1974	211.9	444.5	207.7	130.3	106.5
1973	210.4	452.0	203.6	134.8	113.6
1972	208.8	452.8	213.1	130.2	109.5
1971	207.1	442.7	212.3	124.4	106.0
1970	204.9	435.7	209.8	122.2	103.7
1969	202.7	439.8	209.7	121.1	109.0
1968	200.7	437.6	210.0	116.5	111.1
1967	198.7	426.2	206.1	111.2	109.0
1966	196.6	427.9	203.0	108.4	116.5
1965	194.3	417.5	201.9	105.0	110.7
1964	191.9	414.3	205.6	102.1	106.6
1963	189.2	403.9	203.3	100.9	99.7
1962	186.5	400.7	201.0	99.1	100.6
1961	183.7	392.7	200.5	96.6	95.6
1960	180.7	394.5	199.1	97.6	97.8
1959	177.8	403.1	200.5	97.6	104.9
1958	174.9	391.9	197.2	96.2	98.4
1957	172.0	400.7	201.8	97.9	101.0
1956	168.9	416.2	207.4	99.7	109.1
1955	165.9	411.8	204.1	98.4	109.3
1954	163.0	395.5	200.1	93.2	102.3
1953	160.2	407.0	201.4	96.2	109.3
1952	157.6	403.2	199.4	96.2	107.7
1951	154.9	406.4	198.5	99.0	108.8
1950	152.3	408.7	200.7	95.5	112.4
1949	149.8	386.7	198.7	91.0	97.0
1948	147.2	409.0	201.0	98.4	109.6
1947	144.7	413.0	211.7	98.3	103.0
1946	141.9	414.9	217.4	93.3	104.2
1945	140.5	419.2	221.4	98.3	99.6
1944	138.9	431.4	224.9	100.2	106.2
1943	137.2	418.6	213.0	97.4	108.3
1942	135.4	414.2	205.6	92.9	115.6
1941	133.9	409.0	198.8	91.9	118.3
1940	132.6	375.7	194.0	87.1	94.6
1939	131.5	358.4	190.1	82.3	86.1
1938	130.5	332.9	181.4	78.3	73.2
1937	129.5	359.9	181.4	86.1	92.3
1936	128.7	353.1	184.1	85.1	83.8
1935	127.9	326.7	175.6	79.1	71.9
1934	127.0	325.2	187.4	76.9	60.8
1933	126.2	317.3	187.3	74.3	60.7
1932	125.4	304.1	178.8	72.3	53.0
1931	124.6	333.1	183.4	78.6	71.1
1930	123.6	353.0	184.2	84.3	84.4
1929	122.2	383.5	186.9	92.1	104.4
1928	120.9	373.2	184.5	90.7	98.0
1927	119.4	376.2	185.5	91.2	99.5
1926	117.8	387.7	188.5	95.6	103.5
1925	116.1	384.3	186.8	93.5	103.9
1924	114.4	383.9	189.7	95.5	98.7
1923	112.3	397.3	193.3	100.8	103.2
1922	110.4	369.4	187.5	90.7	91.2
1921	108.8	333.9	168.5	91.2	74.3
1920	106.8	392.9	183.5	103.6	105.8
1919	105.4	385.2	182.4	99.2	103.7
1918	104.9	396.2	180.4	103.8	112.0
1917	103.7	398.5	181.2	104.9	112.4
1916	102.3	387.5	171.3	100.8	115.4
1915	100.8	379.4	180.7	94.7	104.1
1914	99.4	396.7	189.1	93.8	113.8
1913	97.5	399.1	185.5	99.6	114.0
1912	95.6	405.6	195.8	97.3	112.6
1911	94.2	402.0	191.1	95.1	115.9
1910	92.7	403.0	190.1	95.0	118.0
1909	90.8	405.1	193.3	92.2	119.6
1908	89.0	395.0	192.5	89.5	113.0
1907	87.3	406.9	189.6	95.7	121.6
1906	85.7	412.5	197.3	89.8	125.3
1905	84.0	402.0	194.4	89.7	117.9
1904	82.4	400.3	200.4	85.8	114.1
1903	80.8	391.5	193.2	87.4	110.8
1902	79.4	382.9	189.4	80.7	112.8
1901	77.8	372.7	183.7	80.8	108.3
1900	76.3	372.4	186.3	78.2	107.9

Source: "Population" represents Census estimates (including Alaska and Hawaii) for July 1 of each year. For the periods 1917-1919 and 1930-1977, includes Armed Forces overseas. The "Per capita consumption" figures were computed by dividing appropriate figures in table A5 by these "population" figures.

CHART 2-UNITED STATES POPULATION, 1900-1990
CONSUMPTION OF RAW MATERIALS BY USE, 1900-1977

(Consumption measured in constant 1972 dollars. The highest and lowest census projections of population are shown for the period 1980-1990.)



Raw Materials Consumption Rates per Capita

(In constant 1972 dollars)

Period	All raw materials		Foods		Energy materials		Physical-structure materials	
	Year	Dollars per capita	Year	Dollars per capita	Year	Dollars per capita	Year	Dollars per capita
	Highest rate of consumption							
1970-1977....	1977	453.8	1976	214.5	1977	136.0	1973	113.6
1960-1969....	1969	439.8	1968	210.0	1969	121.1	1966	116.5
1950-1959....	1956	416.2	1956	207.4	1956	99.7	1950	112.4
1940-1949....	1944	431.4	1944	224.9	1944	100.2	1941	118.3
1930-1939....	1937	359.9	1939	190.1	1937	86.1	1937	92.3
1920-1929....	1923	397.3	1923	193.3	1920	103.6	1920	105.8
1910-1919....	1912	405.6	1912	195.8	1917	104.9	1910	118.0
1900-1909....	1906	412.5	1904	200.4	1907	95.7	1906	125.3
	Lowest rate of consumption							
1970-1977....	1975	423.6	1973	203.6	1970	122.2	1975	92.5
1960-1969....	1961	392.7	1960	199.1	1961	96.6	1961	95.6
1950-1959....	1958	391.9	1958	197.2	1954	93.2	1958	98.4
1940-1949....	1940	375.7	1940	194.0	1940	87.1	1940	94.6
1930-1939....	1932	304.1	1935	175.6	1932	72.3	1932	53.0
1920-1929....	1921	333.9	1921	168.5	1922, 1928	90.7	1921	74.3
1910-1919....	1915	379.4	1916	171.3	1914	93.8	1919	103.7
1900-1909....	1900	372.4	1901	183.7	1900	78.2	1900	107.9
	Average rate of consumption							
1970-1977....	-	444.6	-	209.8	-	129.6	-	105.2
1960-1969....	-	415.5	-	204.0	-	105.8	-	105.7
1950-1959....	-	404.4	-	201.1	-	97.1	-	106.2
1940-1949....	-	409.2	-	208.6	-	94.9	-	105.6
1930-1939....	-	336.4	-	182.9	-	79.7	-	73.7
1920-1929....	-	378.2	-	185.5	-	94.5	-	98.2
1910-1919....	-	395.3	-	184.8	-	98.4	-	112.2
1900-1909....	-	394.1	-	192.0	-	87.0	-	115.1

BROAD SOURCE CLASSES

Another important way to study raw materials is on the basis of sources of the materials: from mineral deposits; from forests; from oceans, lakes, and streams; or from agriculture. This classification permits us to consider the kinds of technology and manual skills required; the classification of the materials as exhaustable, semiexhaustable, or renewable; and the ecological and environmental impact of selecting particular materials.

Table 3 and Chart 3 compare population and consumption of materials by major source classes. Per capita consumption of agricultural materials declined from $243 in 1900 and $262 in 1906 to $217 in 1973 and $223 in 1977. At the same time consumption of forest products declined from $72 in 1900 and 1901 to $25 in 1975 and $30 in 1977. Meanwhile, minerals per capita consumption increased from $49 in 1900 to $189 in 1977.

It is interesting to note that while per capita annual consumption of all raw materials was at a peak of $454 in 1977,

and had risen 6 percent in the last decade, it was only 10 percent higher than the first decade peak of $412. However, the per capita ratios for none of the five major sources of raw materials attained a peak in 1977. The peak for agricultural products in the 70's occurred in 1971, for fishery and wildlife products in 1972, for forest products and minerals in 1973, and for direct energy in 1974 and 1975. Nevertheless, the peak year for per capita energy materials use was 1977, as previously mentioned, with a 22 percent increase in the last decade. In the same decade per capita consumption of foods increased by less than 3 percent, and per capita consumption of physical-structure materials declined by over 2 percent.

Table 3. Per Capita Consumption of Raw Materials in the United States, by Broad Source Classes: 1900 to 1977

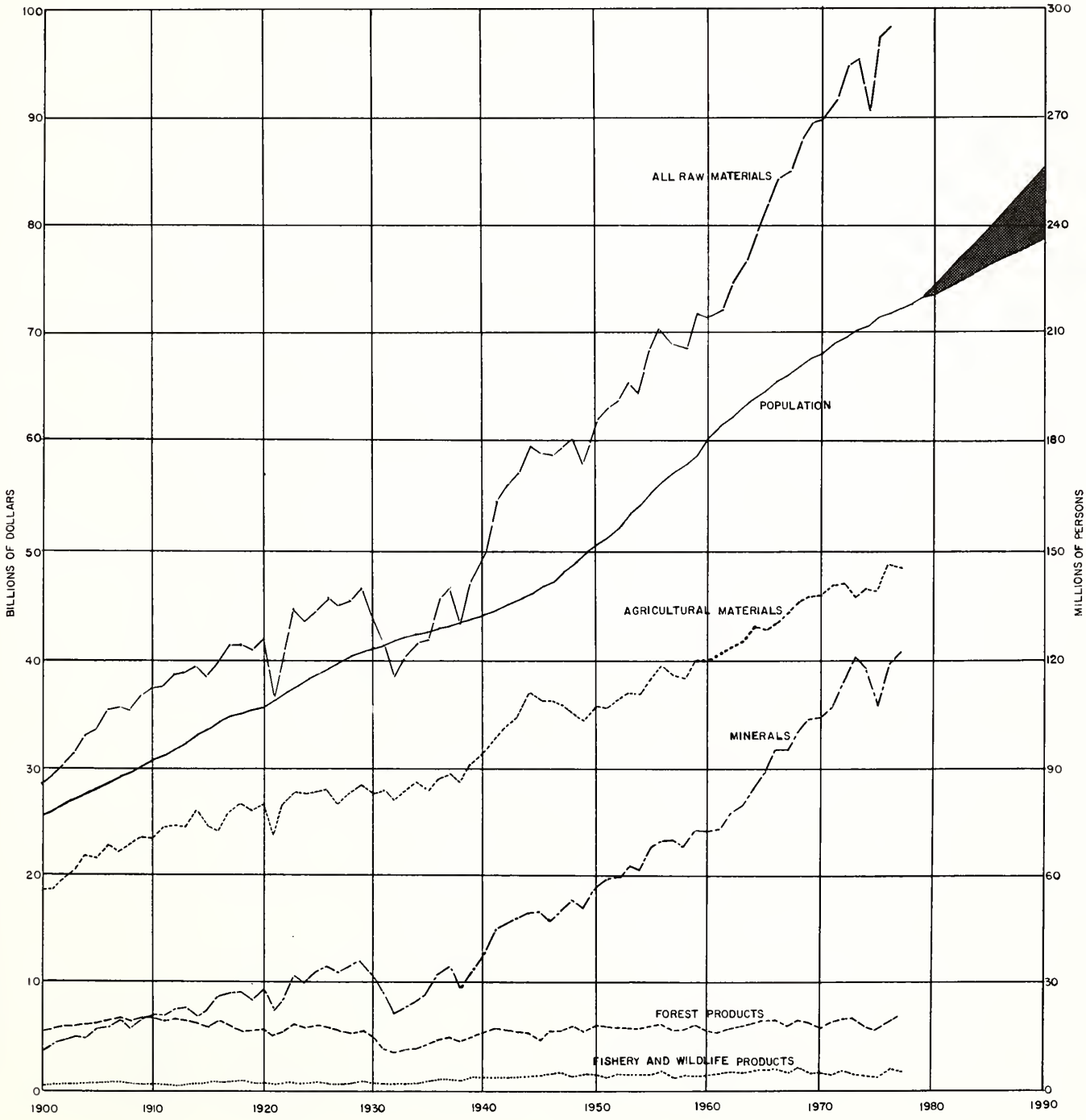
(Money figures in constant 1972 dollars)

Year	Per capita consumption (dollars) of--						Year	Per capita consumption (dollars) of--					
	All raw materials	Agricultural materials	Fishery and wildlife products	Forest products	Minerals	Direct energy		All raw materials	Agricultural materials	Fishery and wildlife products	Forest products	Minerals	Direct energy
							1939....	358.4	229.3	7.8	36.9	83.0	1.4
							1938....	332.9	218.8	7.2	34.2	71.3	1.4
1977.....	453.8	223.0	8.7	29.6	188.7	3.8	1937....	359.9	226.5	7.7	37.7	86.6	1.4
1976.....	451.7	226.5	8.8	28.0	183.5	5.0	1936....	353.1	225.1	7.5	36.4	82.8	1.2
1975.....	423.6	217.8	7.6	24.8	168.0	5.3	1935....	326.7	217.2	6.5	32.6	69.2	1.2
1974.....	444.5	219.5	7.9	27.6	184.2	5.3	1934....	325.2	224.0	6.0	29.9	64.2	1.1
1973.....	452.0	217.4	8.1	30.6	191.0	4.9	1933....	317.3	220.2	5.9	29.1	61.0	1.1
1972.....	452.8	225.5	9.5	30.5	182.3	4.9	1932....	304.1	214.6	5.7	26.3	56.4	1.1
1971.....	442.7	226.7	8.6	29.9	172.7	4.8	1931....	333.1	222.8	7.0	30.9	71.5	1.0
1970.....	435.7	223.9	9.1	28.6	169.5	4.5	1930....	353.0	222.8	7.9	38.7	82.6	1.1
1969.....	439.8	225.9	8.9	29.9	170.5	4.6	1929....	383.5	230.8	8.4	45.9	97.2	1.2
1968.....	437.6	227.1	10.3	30.4	165.6	4.2	1928....	373.2	228.2	7.7	44.5	91.5	1.2
1967.....	426.2	223.8	9.3	29.7	159.2	4.2	1927....	376.2	231.6	7.5	46.2	89.9	1.1
1966.....	427.9	221.6	10.0	31.2	161.4	3.7	1926....	387.7	237.0	6.9	48.6	94.3	1.0
1965.....	417.5	220.4	9.4	31.6	152.4	3.8	1925....	384.3	237.1	6.3	50.4	89.6	0.9
1964.....	414.3	224.8	9.0	31.3	145.7	3.5	1924....	383.9	238.7	6.8	50.5	87.0	0.8
1963.....	403.9	221.6	8.7	30.4	139.9	3.3	1923....	397.3	243.8	6.2	53.7	92.8	0.8
1962.....	400.7	220.8	9.0	29.8	137.6	3.4	1922....	369.4	237.0	6.4	50.3	75.0	0.8
1961.....	392.7	220.4	8.2	29.2	131.8	3.1	1921....	333.9	214.0	6.2	46.2	66.8	0.7
1960.....	394.5	221.2	8.0	30.0	132.3	3.1	1920....	392.9	245.4	6.9	53.5	86.3	0.7
1959.....	403.1	224.7	8.0	32.9	134.6	2.9	1919....	385.2	244.9	7.0	53.3	79.4	0.6
1958.....	391.9	220.2	8.3	30.6	129.7	3.0	1918....	396.2	250.2	7.0	52.1	86.2	0.6
1957.....	400.7	224.9	8.0	31.0	133.9	2.9	1917....	398.5	247.4	7.5	55.9	87.1	0.5
1956.....	416.2	233.4	8.3	35.4	136.2	2.7	1916....	387.5	234.6	7.5	60.1	84.8	0.5
1955.....	411.8	231.5	8.1	35.3	134.3	2.6	1915....	379.4	241.0	7.5	57.7	72.7	0.4
1954.....	395.5	226.0	8.4	34.5	124.1	2.5	1914....	396.7	258.6	7.7	61.2	68.8	0.4
1953.....	407.0	230.7	8.6	35.4	129.8	2.5	1913....	399.1	248.3	7.4	64.7	78.3	0.4
1952.....	403.2	229.2	8.7	36.2	126.6	2.6	1912....	405.6	254.7	7.1	67.3	76.1	0.3
1951.....	406.4	230.3	8.4	37.0	128.1	2.5	1911....	402.0	255.8	7.4	66.8	71.7	0.3
1950.....	408.7	234.7	8.8	38.2	124.5	2.5	1910....	403.0	251.0	7.5	69.8	74.5	0.3
1949.....	386.7	229.7	9.1	34.4	111.2	2.3	1909....	405.1	256.3	7.3	71.1	70.1	0.3
1948.....	409.0	238.0	10.0	38.9	119.8	2.2	1908....	395.0	255.4	7.4	69.6	62.4	0.2
1947.....	413.0	247.2	8.9	37.6	117.1	2.1	1907....	406.9	251.4	7.5	75.4	72.3	0.2
1946.....	414.9	254.2	12.3	37.0	109.1	2.2	1906....	412.5	262.0	7.7	74.6	67.9	0.2
1945.....	419.2	256.7	11.9	33.2	115.1	2.2	1905....	402.0	256.1	7.9	72.6	65.3	0.2
1944.....	431.4	265.8	10.2	36.8	116.5	2.1	1904....	400.3	261.7	7.9	72.9	57.7	0.2
1943.....	418.6	252.9	9.8	37.7	116.1	2.1	1903....	391.5	249.5	7.9	72.8	61.1	0.2
1942.....	414.2	249.3	8.7	41.2	113.1	1.9	1902....	382.9	246.6	7.9	72.7	55.6	0.2
1941.....	409.0	245.3	8.8	42.5	110.9	1.5	1901....	372.7	239.5	8.0	72.0	53.1	0.2
1940.....	375.7	235.1	8.2	38.3	92.6	1.5	1900....	372.4	243.4	7.8	71.7	49.4	0.1

Source: "Per capita consumption" figures were computed by dividing appropriate figures in table A4 by population figures as shown in table 2.

CHART 3-UNITED STATES POPULATION, 1900-1990
CONSUMPTION OF RAW MATERIALS BY SOURCE, 1900-1977

(Consumption measured in constant 1972 dollars. The highest and lowest census projections of population are shown for the period 1980-1990.)



AGGREGATE CONSUMPTION OF RAW MATERIALS

In spite of the increasing rates of raw materials consumption, these rates are not increasing nearly as fast as our standard of living. As shown in the tabulation below in billions of 1972 dollars, G.N.P. was nearly 14 times as large as the value of raw materials consumed in 1977, compared with 12 times in 1969, 8 times in 1949, and only 4 times in 1900. Clearly, we have made great strides in making raw materials go further.

Ratio of Gross National Product to Raw Materials Consumption

Year	Billion 1972 dollars		Ratio of GNP to RM
	Gross national product (GNP)	All raw materials (RM)	
1977....	1,337	98.4	13.6
1969....	1,088	89.2	12.2
1959....	713	71.7	9.9
1949....	486	57.9	8.4
1939....	314	47.1	6.7
1929....	305	46.9	6.5
1919....	219	40.6	5.4
1909....	175	36.8	4.8
1900....	115	28.4	4.0

The average annual increase in raw materials consumption showed rapid expansion between the 1920's and the 1950's, and a further expansion in the 1960's. However, by the 1970's there were significant contractions in this rate for all of the classes shown below, even for mineral fuels. A similar reversal of trend, but showing a more rapid decline, appears in the figures for the average annual percent increase in consumption.

Chart 4, based on Table A5, provides a summary picture of the percent distribution of consumption of raw materials by use classes. This chart highlights the increasing dependence of our economy on oil and gas for energy purposes: an increase from only 2 percent in 1900, to 52 percent in 1948, a peak of nearly 80 percent in 1972, then a slight decline to 77 percent in 1976. The chart also points up our increasing dependence on minerals for physical-structure materials: from 16 percent in 1900 to a peak of 57 percent in 1974.

Table 4 provides, by decades and by source, a comparison of the distribution of domestic production of raw materials with domestic raw materials consumption. It shows that whereas the portion of production accounted for by agricultural materials has declined only from 64 percent in the first decade to 60 percent in 1975-1977, consumption has declined in the same period from 64 percent to 50 percent. For forest products, a decline is shown for both production and consumption from 18 percent in 1900-1909 to 6 percent in the late 1970's. Minerals accounted for 16 percent of both production and consumption at the beginning of the century. This rose to 32 percent of production in 1975-1977, and to 41 percent of consumption in the same period. The percent of total consumption represented by minerals increased for each period over the preceding one, except in the depression of the 1930's. For domestic production, however, the 32 percent for 1975-1977 represented a decline from 35 percent for 1970-1974.

Increases in Raw Materials Consumption and in Population

Item	1969-1977	1959-1969	1949-1959	1919-1929	1900-1909
	Average annual increase in consumption (billion 1972 dollars or million persons)				
All raw materials.....	1.15	1.75	1.37	0.63	0.93
Agricultural materials.....	0.32	0.59	0.55	0.24	0.52
Minerals.....	0.79	1.06	0.73	0.35	0.29
Mineral fuels.....	0.68	0.79	0.48	0.23	0.21
Population.....	1.76	2.49	2.80	1.68	1.61
	Average annual percent increase in consumption				
All raw materials.....	1.23	2.17	2.12	1.43	2.85
Agricultural materials.....	0.67	1.37	1.49	0.89	2.50
Minerals.....	2.11	3.63	3.58	3.46	5.70
Mineral fuels.....	2.46	3.80	3.34	3.15	6.16
Population.....	0.84	1.31	1.71	1.48	1.93

CHART 4.-CONSUMPTION OF RAW MATERIALS IN THE UNITED STATES: 1900-1977

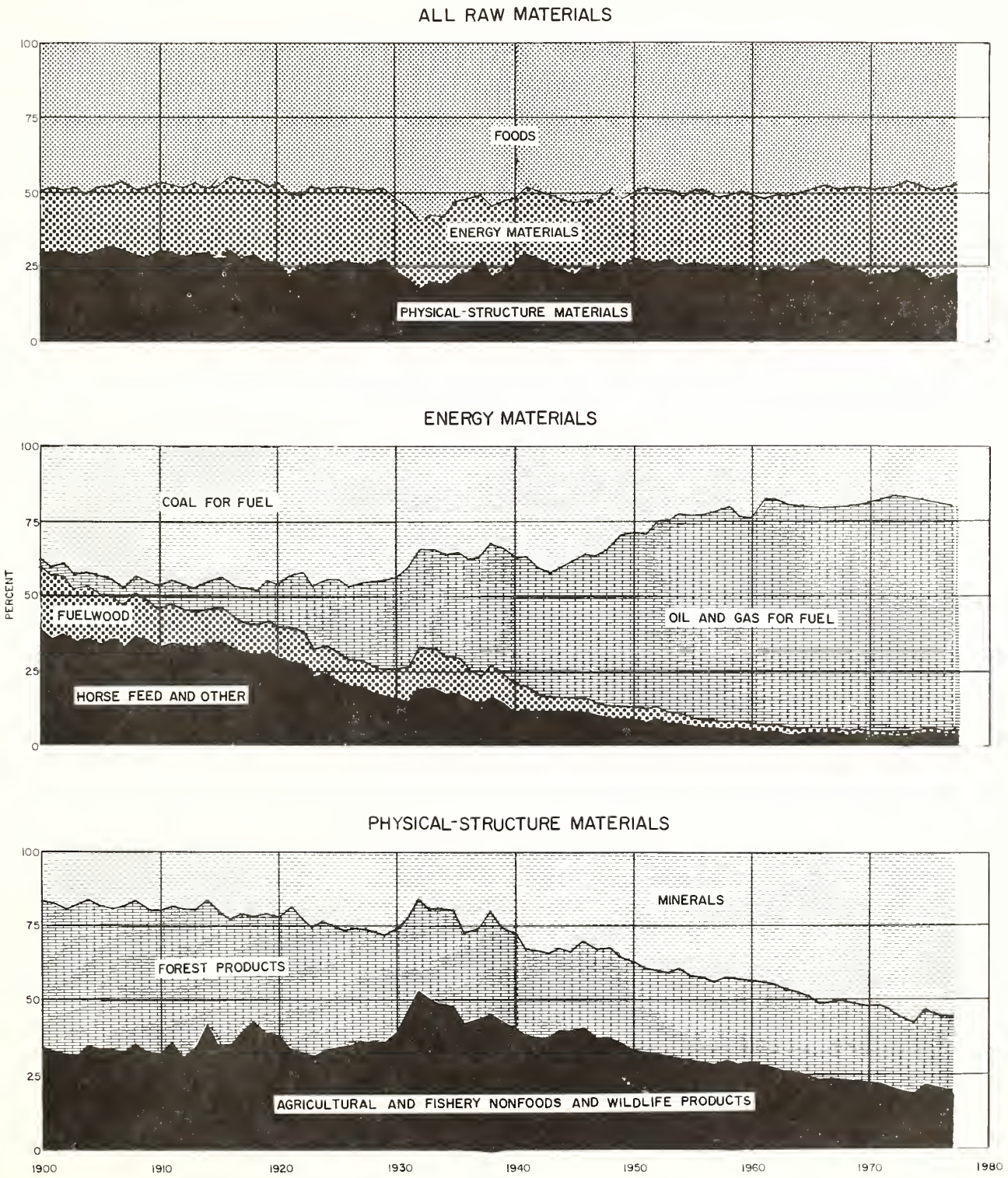


Table 4. **Percent Distribution of Production and Consumption of Raw Materials in the United States, by Broad Product Groups: 10-Year Periods, 1900 to 1974, and 1975 to 1977**

Raw materials group	Average								
	1975-1977	1970-1974	1960-1969	1950-1959	1940-1949	1930-1939	1920-1929	1910-1919	1900-1909
PRODUCTION									
All raw materials.....million 1972 dollars..	89,486	85,383	75,321	63,379	55,236	41,614	42,986	40,091	34,394
percent..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agricultural materials.....do..	60.2	56.3	58.0	58.9	60.7	64.5	61.2	62.4	64.3
Crops.....do..	221.9	20.6	20.5	21.0	22.0	25.3	25.3	27.1	27.7
Livestock.....do..	35.4	35.7	37.5	37.9	38.6	39.1	35.9	35.2	36.6
Fishery and wildlife products.....do..	1.0	1.0	1.2	1.4	1.9	1.6	1.4	1.4	1.5
Direct energy.....do..	1.1	1.2	0.9	0.7	0.5	0.4	0.2	0.1	-
Forest products.....do..	6.0	6.5	7.1	8.3	9.2	10.2	13.2	15.3	18.1
Sawlogs.....do..	3.5	3.8	4.3	5.3	5.7	5.2	8.0	9.1	11.3
Pulpwood.....do..	1.0	1.2	1.0	0.9	0.6	0.3	0.2	0.2	0.1
Other forest products.....do..	1.5	1.5	1.8	2.2	3.0	4.7	4.9	6.0	6.7
All minerals.....do..	31.6	35.0	32.8	30.7	27.6	23.3	24.0	20.7	16.0
Metal ores.....do..	3.2	3.7	3.6	3.7	3.9	2.9	3.7	4.1	3.2
Mineral fuels.....do..	23.2	25.8	24.1	23.0	21.2	18.4	18.0	14.7	10.9
Construction materials.....do..	3.3	3.7	3.6	2.8	1.7	1.5	1.9	1.5	1.7
Other nonmetallic minerals.....do..	1.8	1.8	1.6	1.2	0.8	0.5	0.4	0.3	0.2
CONSUMPTION									
All raw materials.....million 1972 dollars..	95,345	92,959	80,098	66,612	57,367	42,902	43,478	39,372	32,901
percent..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agricultural materials.....do..	50.2	50.0	53.6	56.5	60.4	66.0	61.9	62.9	64.0
Crops.....do..	16.4	16.3	17.6	19.8	23.1	26.3	25.1	26.6	26.8
Livestock.....do..	33.8	33.6	36.0	36.7	37.4	39.8	36.8	36.3	37.2
Fishery and wildlife products.....do..	1.9	1.9	2.2	2.1	2.4	2.1	1.8	1.9	2.0
Direct energy.....do..	1.1	1.1	0.9	0.7	0.5	0.4	0.2	0.1	0.1
Forest products.....do..	6.2	6.6	7.3	8.5	9.2	9.9	12.9	15.4	18.4
Sawlogs.....do..	3.6	3.8	4.4	5.4	5.6	4.9	7.8	9.2	11.6
Pulpwood.....do..	1.1	1.3	1.2	1.1	0.8	0.7	0.5	0.3	0.2
Other forest products.....do..	1.5	1.5	1.7	2.0	2.8	4.4	4.6	5.9	6.6
All minerals.....do..	40.6	40.4	36.1	32.2	27.4	21.7	23.1	19.8	15.7
Metal ores.....do..	5.3	5.7	5.5	5.5	5.1	2.5	3.8	3.6	2.8
Mineral fuels.....do..	30.1	29.3	25.5	22.6	19.7	17.1	16.9	14.2	10.7
Construction materials.....do..	3.2	3.5	3.5	2.8	1.7	1.5	1.9	1.6	1.8
Other nonmetallic minerals.....do..	2.0	1.9	1.6	1.3	0.9	0.5	0.5	0.4	0.3

Source: Based on table 5.

Table 5 provides a summary for 5 year periods of the basic annual series in Tables A1, A2, A3, and A4 for production, imports, exports, and consumption by broad source classes. More detailed series, by source classes, are provided in Tables A6, A7, and A8 for agricultural and fishery products and in Table A9 for minerals.

PRODUCTION OF RAW MATERIALS

The total value of domestic production of raw materials amounted to 94 percent of the value of consumption of such materials in 1975-1977, as compared with 105 percent in 1900-1904. This, however, does not show nearly the full impact of

Table 5. Average Annual Production, Imports, Exports, and Consumption of Raw Materials in the United States, by Broad Product Groups, for 5-Year Periods, 1900 to 1974 and 1975 to 1977

(In millions of constant 1972 dollars)

Period	All raw materials	Agricultural materials			Fishery and wildlife products			Direct energy
		Total	Crops	Livestock	Total	Fishery products	Wildlife products	
Production:								
1975-1977	89,486	53,913	22,250	31,663	889	782	107	1,011
1970-1974	85,383	48,907	17,598	30,499	846	744	102	1,022
1965-1969	79,557	45,378	16,241	29,137	874	772	102	814
1960-1964	71,085	42,024	14,706	27,318	869	771	97	612
1955-1959	66,382	39,168	13,809	25,359	893	784	109	489
1950-1954	60,376	35,468	12,845	22,623	911	816	95	397
1945-1949	57,223	34,794	12,894	21,900	1,143	1,055	87	321
1940-1944	53,249	32,238	11,445	20,793	1,002	928	74	249
1935-1939	43,533	27,309	11,202	16,107	725	665	60	172
1930-1934	39,695	26,345	9,895	16,449	618	558	60	133
1925-1929	44,584	26,723	11,020	15,703	662	617	45	125
1920-1924	41,388	25,859	10,720	15,139	539	500	39	85
1915-1919	40,964	25,554	10,943	14,611	593	561	32	56
1910-1914	39,218	24,473	10,826	13,646	557	494	64	32
1905-1909	36,644	23,225	9,949	13,277	534	479	55	21
1900-1904	32,144	21,026	9,113	11,913	519	471	48	13
Imports:[1]								
1975-1977	21,507	6,027	4,362	1,665	1,110	1,054	57	-
1970-1974	18,034	5,858	4,099	1,760	1,124	1,064	60	-
1965-1969	14,055	5,307	3,712	1,595	1,135	1,025	108	-
1960-1964	11,441	4,992	3,606	1,387	793	690	103	-
1955-1959	10,204	4,490	3,518	972	559	470	89	-
1950-1954	8,611	4,283	3,427	856	479	371	108	-
1945-1949	6,881	3,972	3,153	819	422	259	163	-
1940-1944	6,256	3,803	2,872	931	287	153	134	-
1935-1939	5,604	3,998	3,060	937	267	145	122	-
1930-1934	4,581	3,293	2,526	767	236	137	99	-
1925-1929	5,689	3,885	2,756	1,128	262	157	105	-
1920-1924	4,799	3,215	2,302	913	228	157	71	-
1915-1919	4,120	2,940	1,865	1,075	229	167	62	-
1910-1914	3,232	2,303	1,568	736	210	153	57	-
1905-1909	2,555	1,841	1,365	476	167	111	56	-
1900-1904	2,175	1,558	1,188	370	148	86	62	-
Exports:[1]								
1975-1977	13,192	9,919	8,822	1,097	193	101	92	-
1970-1974	11,257	8,103	7,132	972	167	88	79	-
1965-1969	8,682	6,055	5,204	851	108	51	57	-
1960-1964	7,730	5,557	4,610	947	64	29	35	-
1955-1959	6,088	3,992	3,225	767	51	26	25	-
1950-1954	4,568	2,941	2,442	499	40	21	19	-
1945-1949	4,438	2,740	2,037	703	54	36	18	-
1940-1944	3,493	1,831	901	930	48	41	7	-
1935-1939	3,142	1,670	1,526	143	41	22	19	-
1930-1934	3,325	2,118	1,871	247	39	20	20	-
1925-1929	4,729	2,851	2,455	395	43	27	16	-
1920-1924	4,372	2,971	2,307	665	47	33	14	-
1915-1919	4,738	3,293	2,165	1,128	67	52	15	-
1910-1914	3,762	2,449	2,083	366	56	25	31	-
1905-1909	3,701	2,684	1,988	696	41	20	21	-
1900-1904	3,675	2,883	2,015	868	41	20	22	-
Consumption:								
1975-1977	95,345	47,858	15,635	32,223	1,806	1,735	71	1,011
1970-1974	92,959	46,436	15,163	31,274	1,803	1,721	83	1,022
1965-1969	85,382	44,450	14,559	29,891	1,901	1,748	152	814
1960-1964	74,813	41,338	13,611	27,728	1,598	1,432	165	612
1955-1959	69,545	38,995	13,245	25,750	1,401	1,228	173	489
1950-1954	63,680	36,265	13,137	23,128	1,350	1,166	184	397
1945-1949	59,132	35,472	13,348	22,124	1,510	1,279	232	321
1940-1944	55,602	33,876	13,116	20,760	1,241	1,040	201	249
1935-1939	44,881	28,958	11,879	17,079	952	788	164	172
1930-1934	40,922	27,687	10,648	17,040	815	675	140	133
1925-1929	45,437	27,775	11,215	16,561	881	747	134	125
1920-1924	41,519	26,067	10,650	15,417	720	624	96	85
1915-1919	40,275	25,202	10,643	14,558	755	676	79	56
1910-1914	38,470	24,327	10,311	14,016	712	621	90	32
1905-1909	35,315	22,382	9,326	13,056	660	570	90	21
1900-1904	30,487	19,701	8,286	11,415	626	537	89	13

See footnotes at end of table.

Table 5. Average Annual Production, Imports, Exports, and Consumption of Raw Materials in the United States, by Broad Product Groups, for 5-Year Periods, 1900 to 1974 and 1975 to 1977—Continued

(In millions of constant 1972 dollars)

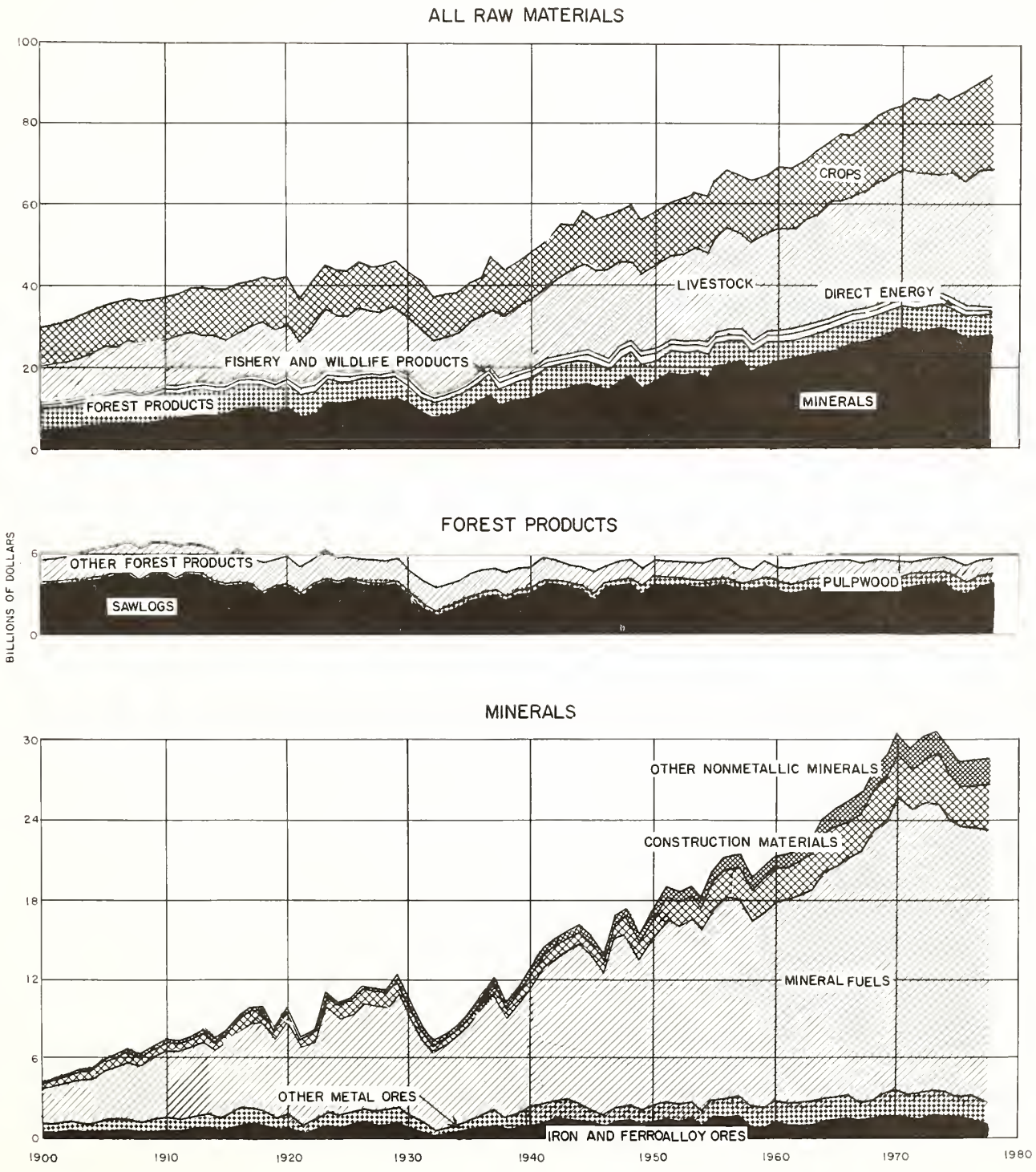
Period	Forest products				Minerals					
	Total	Sawlogs	Pulpwood	Other forest products	Total	Iron and ferroalloy ores	Other metal ores	Mineral fuels	Construction materials	Other nonmetallic minerals
Production:										
1975-1977	5,388	3,144	926	1,318	28,286	1,109	1,788	20,776	2,961	1,652
1970-1974	5,559	3,252	991	1,316	29,860	1,270	1,918	22,012	3,148	1,511
1965-1969	5,512	3,313	871	1,328	26,979	1,236	1,586	19,879	2,914	1,363
1960-1964	5,185	3,110	697	1,378	22,396	1,034	1,517	16,367	2,498	979
1955-1959	5,247	3,297	612	1,338	20,586	1,074	1,289	15,303	2,095	825
1950-1954	5,328	3,433	477	1,417	18,272	1,160	1,126	13,814	1,494	677
1945-1949	5,018	3,090	350	1,579	15,947	971	942	12,508	1,015	512
1940-1944	5,175	3,171	285	1,719	14,586	1,100	1,311	10,891	888	396
1935-1939	4,584	2,465	166	1,953	10,743	537	943	8,335	691	237
1930-1934	3,919	1,829	118	1,972	8,679	305	597	7,018	586	173
1925-1929	5,670	3,583	115	1,972	11,404	693	1,117	8,440	951	204
1920-1924	5,637	3,330	92	2,215	9,268	561	823	7,076	647	161
1915-1919	5,780	3,313	90	2,377	8,980	714	1,155	6,416	554	142
1910-1914	6,520	4,013	70	2,437	7,636	541	909	5,404	683	98
1905-1909	6,523	4,104	59	2,360	6,341	490	775	4,366	628	82
1900-1904	5,943	3,680	43	2,220	4,643	333	618	3,100	532	60
Imports:[1]										
1975-1977	1,197	748	332	117	13,173	1,497	1,756	9,202	137	580
1970-1974	1,219	722	364	133	9,832	1,455	1,551	6,182	156	488
1965-1969	966	548	334	84	6,647	1,307	1,350	3,475	135	380
1960-1964	771	448	277	46	4,884	942	1,000	2,570	127	245
1955-1959	627	338	256	33	4,528	918	1,379	1,922	111	197
1950-1954	548	286	252	10	3,301	649	1,232	1,172	100	148
1945-1949	362	142	219	2	2,125	409	962	592	67	95
1940-1944	271	109	160	2	1,894	411	1,070	273	46	94
1935-1939	240	61	178	2	1,099	191	612	205	31	59
1930-1934	201	61	139	1	850	96	440	256	19	39
1925-1929	318	170	146	2	1,225	152	672	304	40	57
1920-1924	246	150	95	2	1,109	86	553	402	25	43
1915-1919	171	117	53	1	780	125	481	124	16	34
1910-1914	137	94	42	1	581	95	382	40	16	48
1905-1909	114	89	25	(Z)	432	61	304	18	12	38
1900-1904	77	62	15	(Z)	392	94	230	24	8	36
Exports:[1]										
1975-1977	667	433	182	52	2,413	594	616	834	37	332
1970-1974	641	398	180	63	2,346	585	617	825	26	293
1965-1969	474	278	125	71	2,045	468	578	750	21	228
1960-1964	285	141	85	59	1,824	484	560	617	11	152
1955-1959	201	90	47	64	1,845	366	392	974	7	106
1950-1954	165	76	23	66	1,421	206	283	857	6	69
1945-1949	134	63	16	54	1,510	237	299	914	6	54
1940-1944	119	47	25	47	1,494	270	483	703	4	34
1935-1939	212	105	14	93	1,219	179	332	672	2	34
1930-1934	241	134	8	100	926	56	320	524	1	25
1925-1929	369	255	7	108	1,466	83	672	682	2	27
1920-1924	264	174	6	83	1,090	70	472	526	5	18
1915-1919	180	108	7	66	1,198	141	596	449	5	8
1910-1914	340	223	2	115	918	78	481	341	7	12
1905-1909	291	170	2	120	685	38	351	284	3	8
1900-1904	274	145	1	127	477	22	274	164	11	6
Consumption:										
1975-1977	5,919	3,458	1,075	1,385	38,752	2,065	2,990	28,732	3,067	1,898
1970-1974	6,141	3,576	1,175	1,390	37,556	2,233	3,105	27,220	3,277	1,722
1965-1969	6,068	3,582	1,081	1,404	32,150	2,193	2,906	22,487	3,052	1,511
1960-1964	5,622	3,417	889	1,316	25,643	1,517	2,159	18,288	2,613	1,066
1955-1959	5,673	3,545	822	1,306	22,988	1,556	2,164	16,155	2,199	914
1950-1954	5,710	3,643	707	1,360	19,958	1,567	2,064	13,985	1,589	752
1945-1949	5,247	3,168	553	1,527	16,582	1,117	1,700	12,134	1,076	555
1940-1944	5,327	3,233	420	1,674	14,909	1,259	1,777	10,482	930	461
1935-1939	4,613	2,421	330	1,862	10,187	544	778	7,887	719	259
1930-1934	3,880	1,757	249	1,874	8,406	326	481	6,810	604	186
1925-1929	5,618	3,498	255	1,865	11,037	770	1,077	7,969	989	233
1920-1924	5,620	3,305	181	2,134	9,028	579	860	6,737	667	185
1915-1919	5,771	3,322	136	2,313	8,491	700	968	6,092	565	167
1910-1914	6,317	3,884	110	2,323	7,081	543	634	5,078	692	135
1905-1909	6,345	4,023	82	2,240	5,906	509	538	4,109	638	112
1900-1904	5,746	3,596	57	2,093	4,402	404	420	2,958	530	90

[1]Excludes gold.

Source: Based on tables A1, A2, A3, and A4. Also, see appendix A for the methods used in constructing these measures, and for sources and limitations for the basis data used.

CHART 5.-PRODUCTION OF RAW MATERIALS IN THE UNITED STATES: 1900-1977

(Production measured in constant 1972 dollars)



our increasing dependence on foreign sources for raw materials. For minerals, this ratio for the most recent period is 73 percent as against 105 for the early years. Moreover, from all raw materials produced we exported 15 percent in 1975-1977 and in the same period imported 23 percent of our consumption. Chapter 3 will discuss this foreign trade in greater detail. But what is the composition of this domestic production?

Chart 5 shows, by source, production of raw materials in the United States, measured in constant 1972 dollars. The upper section shows all raw materials segregated into 6 major source classes. It emphasizes the increasing magnitude of the minerals portion. In the section which depicts separately details of the forest products class, note the increasing segment represented by pulpwood. In the early years, a large segment of "other forest products" is fuelwood cut for that purpose, but "sawlogs" also includes significant quantities of fuelwood obtained as residues of sawlog production. The section showing details for minerals points up the rapid expansion of mineral fuels production, accompanied by very considerable expansion in metals and other nonmetallics.

RAW MATERIALS PRICES

The basic raw materials series for production, imports, exports, and consumption are developed in constant dollars, for the present report in 1972 dollars. In order to compare these series with others which may be in terms of dollars representative of a different year, as well as to study the impact of prices on consumption, we have constructed price indexes as closely comparable as possible to the consumption series. These are summarized in Table 6 (based on Table B1) for selected years, five year periods, and broad use and source classes. Chart 6 shows these series for the 78 years covered in this report. The methods used in constructing these indexes are described in Appendix B.

Comparison indexes for "all wholesale commodities" and "finished commodities" are included in the table and chart. For most of the period prior to 1940 the prices of raw materials moved approximately parallel to those of wholesale and finished commodities. However, during the period 1940-1948 and after 1963 raw materials prices rose more rapidly than the other two series. With 1972 equal to 100, the 1977 price index for all raw materials is 197, compared with 163 for all wholesale commodities and 142 for finished commodities. Between 1948 and 1963 raw materials prices had risen less rapidly than these other measures.

In the comparison by use classes, we see that for each of the major classes of raw materials, prices have risen in recent years more than for all finished commodities and, except for foods (at 153), also more than for all wholesale commodities. For physical-structure materials the 1977 price index was 188, but the energy materials prices had risen very much more, to an index of 284.

In the classification by source classes, minerals prices are the highest in 1977 at an index of 255, although they rose less rapidly than other raw materials for much of the long period 1900-1973. Minerals prices were relatively higher than all raw materials prices in the early 1920's and for most of the period after 1959. The second most rapidly increasing index shown in Chart 6, among source classes, is the fishery products price index, which reached 208 in 1977. Prices for agricultural products rose the least among raw materials, reaching only 154 in 1977.

Table 6. **Price Indexes for All Wholesale Commodities, Finished Commodities, and Raw Materials in the United States: 5-Year Periods and Selected Years: 1900 to 1977**

(1972=100)

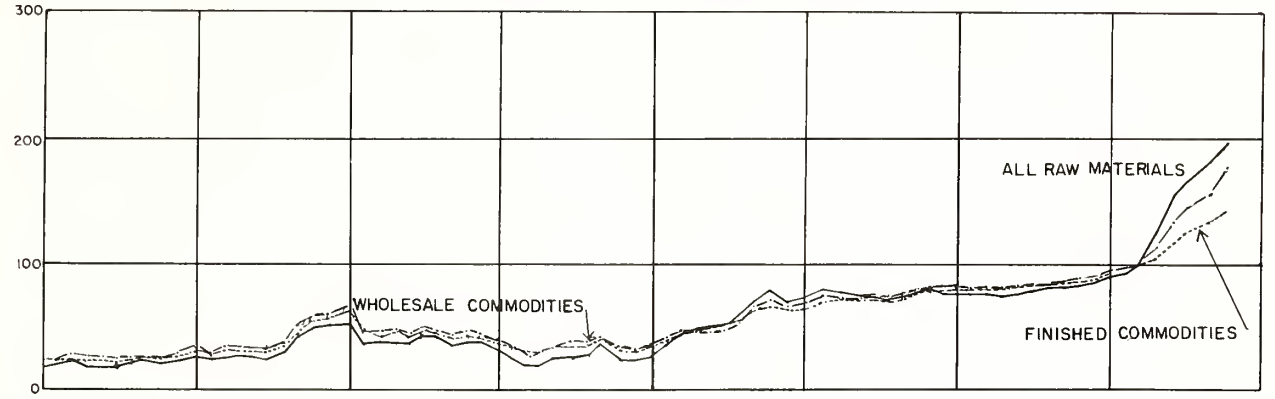
Year or period	All wholesale commodities[1]	Finished commodities[1]	Raw materials[1]						
			All raw materials	By use classes			By major source classes		
				Foods	Energy materials	Physical-structure materials	Agricultural materials	Forest products	Minerals
1977	163	142	197	153	284	188	154	191	255
1976	154	135	181	142	254	177	144	172	231
1975	147	129	168	137	231	162	138	152	211
1970-1974	107	103	113	109	120	111	110	107	117
1970	93	94	89	88	91	90	88	78	93
1965-1969	85	85	82	80	82	84	81	74	84
1960-1964	80	78	75	69	80	79	72	66	80
1955-1959	77	74	74	70	79	79	72	69	78
1950-1954	73	69	75	78	70	75	81	66	69
1950	69	64	71	75	67	70	78	63	64
1945-1949	60	58	64	72	54	58	73	47	53
1940-1944	41	41	39	45	33	38	46	26	35
1935-1939	35	33	29	31	28	28	32	18	30
1930-1934	32	32	24	26	24	24	26	15	27
1929	41	39	38	43	32	37	45	19	36
1925-1929	42	40	39	43	35	38	45	19	38
1920-1924	47	46	39	40	45	42	42	23	46
1920	67	62	53	54	62	54	57	35	61
1915-1919	47	43	39	44	32	40	47	16	37
1910-1914	30	29	25	29	19	25	30	11	22
1905-1909	27	27	22	23	18	24	25	10	22
1900-1904	25	24	19	20	18	21	21	8	22

[1]For sources see appendix B. The figures are based on table B1.

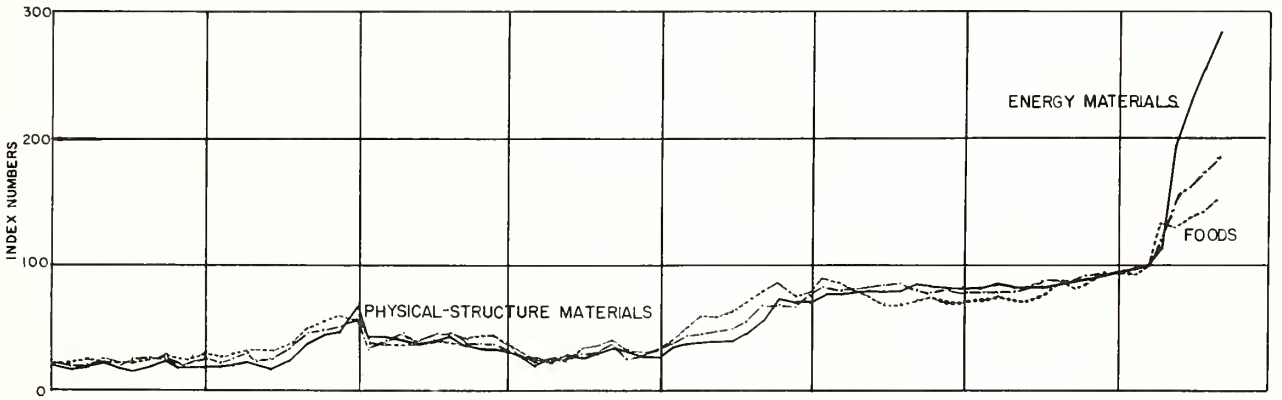
CHART 6.-PRICE INDEXES FOR RAW MATERIALS IN THE UNITED STATES: 1900-1977

(INDEX NUMBERS: 1972=100)

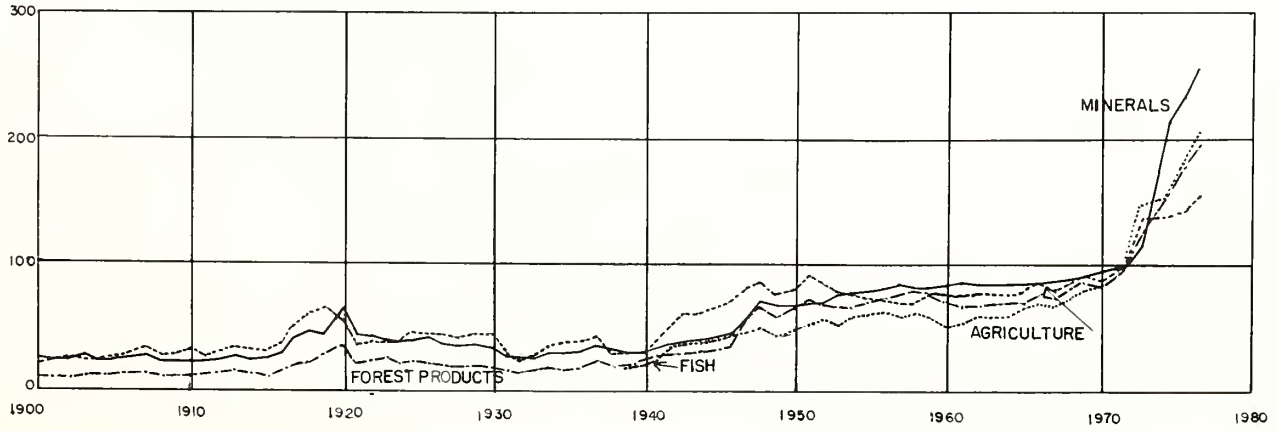
ALL RAW MATERIALS AND COMPARISON INDEXES



RAW MATERIALS BY USE CLASSES



RAW MATERIALS BY SOURCE CLASSES



CHAPTER 3.—Foreign Trade in Raw Materials

One of the most striking characteristics of the last decade is the reversal in our foreign trade balance. In spite of our great natural resources and highly developed economy, our nation has always been much dependant on the rest of the world for many of the things it needs and wants and as a market for many of its products.[1] In its early days, for crude materials, our country was primarily an exporter. Prior to the 1890's, such materials accounted for more than half of its exports (see Table 7), and these were primarily nonfoods. At the same time, over 60 percent of its imports were manufactures and semi-manufactures. Total exports, however, began to exceed imports in the 1870's, and this balance continued until the 1970's. The same type of balance held for all manufactures and semi-manufactures beginning in the 1890's. For crude materials, the trends of such ratios were somewhat different: for crude foods, exports exceeded imports from the 1870's through the 1910's and again in the 1960's and 1970's. Whereas, for other crude materials, exports exceeded imports for all periods prior to the 1910's, but the reverse was true for all of the succeeding periods.

A major component of the rapid increase in net imports (imports less exports) in recent years is the expanding demand for foreign petroleum. This is coupled with the decline since 1970 in domestic petroleum production. Imports of petroleum and petroleum products accounted for the following percents of the total value of imports of all products in current dollars in recent years:

Year	Percent
1977	28.1
1976	26.1
1975	25.5
1974	24.2
1973	11.0
1972	7.7
1971	7.3
1970	6.9

[1] Even in the 1870's, with G.N.P. of only 7 billion dollars, both exports and imports amounted to about 7 percent of this total, nearly as high as the approximately 8 percent of recent years. Such percents were somewhat lower during much of the intervening period.

Table 7. Annual Imports and Exports of Crude and Manufactured Products for the United States: Decade Averages, 1850 to 1969, 1970 to 1974 and 1975 to 1977

(Money figures in millions of current dollars)

Period	Imports[1]			Exports			Net imports[2] (million dollars)			
	Total (million dollars)	Percent of total		Total (million dollars)	Percent of total		Total	Crude materials		Manufacturers and semi-manufacturers
		Crude materials	Manufacturers and semi-manufacturers		Crude materials	Manufacturers and semi-manufacturers		Foods	Other	
1975-1977.....	122,175	30.6	69.4	112,481	20.6	79.4	9,694	-5,575	19,859	-4,590
1970-1974.....	62,314	18.3	81.7	59,928	20.5	79.5	2,386	-2,570	1,683	3,273
1960-1969.....	22,512	24.2	75.8	26,403	19.8	80.2	-3,891	-365	583	-4,109
1950-1959.....	11,843	41.3	58.7	14,476	22.8	77.2	-2,633	854	734	-4,221
1940-1949.....	4,434	49.2	50.8	10,179	14.3	85.7	-5,745	256	466	-6,467
1930-1939.....	2,126	44.8	55.2	2,562	29.2	70.8	-436	196	10	-642
1920-1929.....	3,964	48.6	51.4	4,929	34.6	65.4	-965	28	195	-1,188
1910-1919.....	2,240	51.8	48.2	3,876	30.2	69.8	-1,636	-52	42	-1,626
1900-1909.....	1,088	45.7	54.3	1,555	41.6	58.4	-467	-45	-105	-317
1890-1899.....	757	42.8	57.2	954	48.9	51.1	-197	-41	-101	-55
1880-1889.....	680	36.3	63.7	748	55.0	45.0	-68	-45	-119	96
1870-1879.....	512	32.1	67.9	530	58.1	41.9	-18	-14	-129	125
1860-1869.....	324	26.2	73.8	233	58.3	41.7	91	14	-65	142
1850-1859.....	266	20.7	79.3	214	67.7	32.3	52	16	-105	141

[1] Represents "general imports prior to 1934 and after 1964" for other years, "imports for consumption".
[2] A minus sign (-) indicates a net export.

Source: U.S. Department of Commerce, Bureau of the Census reports.

NET IMPORTS

In constant dollars, net imports expressed as percents of consumption are sometimes called "scarcity factors", since they measure for each period the extent to which the domestic economy is dependent on foreign sources for the specified commodity. Such ratios are shown in Table 8. For all raw materials, except gold, the increasing dependence on imports is notable in almost all successive periods. These ratios increase from 4 percent net exports in the first decade of the century to 9 percent net imports in 1975-1977, up from only 6 percent for net imports in the 1950's and 1960's. This occurred in spite of the large increase in net exports of crops in the later years. After showing net imports of crops for 4 decades, the crops net export ratio of 9 percent for the 1960's increased to 29 percent in the 1975-1977 period.

Very significant increases in net import ratios are shown for fishery products and for forest products, particularly for sawlogs. However, the ratios which may give greatest concern are those for the depletable minerals. Not only have the ratios of net imports to consumption increased for oil and gas from 9 in the 1950's, to 16 in the 1960's, to 25 in 1970-1974, and to 37 in 1975-1979; but also for iron and ferroalloy ores, increasing dependence on foreign sources goes up from 6 percent in the 1920's and 1930's to 13 percent in the 1940's, 32 percent in the 1950's, 35 percent in the 1960's, 39 percent in 1970-1974, and 44 percent in 1975-1977. For other metal ores, except gold, there was maximum dependence on foreign metals (48 percent) in the 1950's, but starting with 26 percent in the 1960's, this increases to 33 percent in 1970-1974, and to 40 percent in 1975-1977.

Chart 7 shows a comparison of gross imports and gross exports, in constant 1972 dollars, for decade periods of the present century. The dominant influence in the later periods of the increasing exports of agricultural products and increasing imports of mineral products stands out strikingly in this visual presentation.

Table 8. **Net Imports of Raw Materials as Percents of United States Consumption: Decade Averages 1900 to 1969; Average 1970 to 1974 and 1975 to 1977**

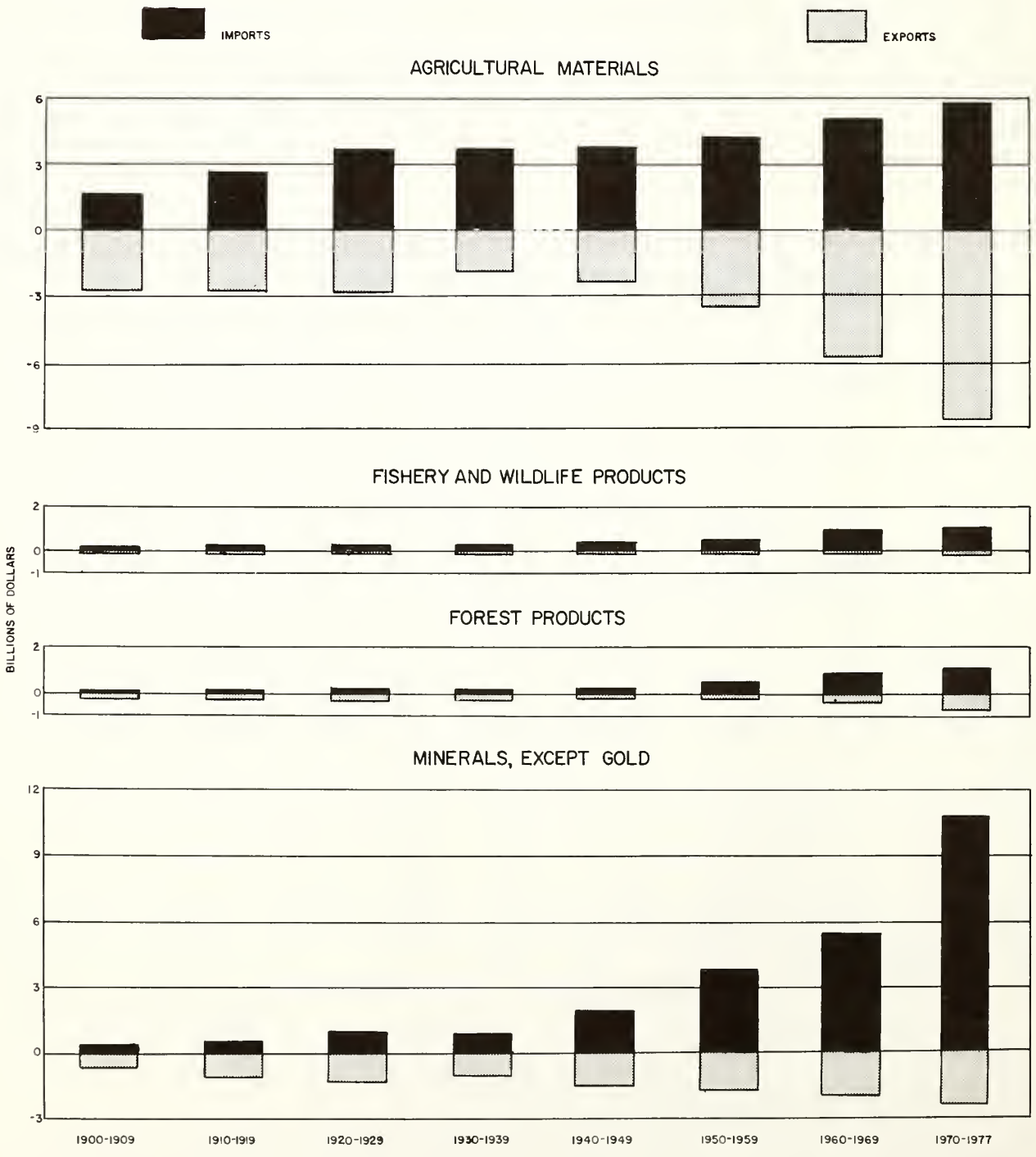
Material	1975-1977	1970-1974	1960-1969	1950-1959	1940-1949	1930-1939	1920-1929	1910-1919	1900-1909
All raw materials, except gold	8.74	7.31	5.69	6.13	4.55	4.33	1.60	-1.46	-4.03
All agricultural materials	-8.13	-4.83	-1.53	2.44	4.62	6.18	2.37	-1.01	-5.15
Crops	-28.53	-20.00	-8.86	4.84	11.66	9.72	1.35	-3.89	-8.23
Livestock	1.76	2.52	2.05	1.15	0.27	3.85	3.07	1.11	-2.93
All fishery and wildlife products	50.78	53.08	50.19	34.42	22.06	23.94	24.98	21.54	18.12
Fishery products	54.93	56.71	51.48	33.17	14.45	16.40	18.53	18.74	14.18
Wildlife products	-49.30	-22.89	37.54	42.86	62.82	59.86	63.48	43.20	41.90
Direct energy	-	-	-	-	-	-	-	-	-
All forest products	8.95	9.41	8.37	7.11	3.59	-0.14	-0.61	-1.75	-3.09
Sawlogs	9.11	9.06	8.24	6.37	2.20	-2.80	-1.60	-1.67	-2.15
Pulpwood	13.95	15.66	20.36	28.65	34.74	50.95	52.29	34.96	26.62
Other forest products, total	4.69	5.04	-	-3.26	-3.03	-5.09	-4.68	-3.86	-5.70
Fuelwood	-	-	-	-	-	-	-	-	-
Other than fuelwood	5.23	5.52	-	-4.84	-5.49	-11.82	-8.02	-6.57	-10.68
All minerals, except gold	27.89	20.08	13.37	10.67	3.25	-1.05	-1.11	-4.89	-3.31
Iron and ferroalloy ores	43.73	38.96	34.96	31.86	13.17	5.98	6.30	0.08	10.41
Other metal ores, except gold	40.45	33.03	26.45	48.03	38.33	31.32	4.53	0.07	-10.45
All mineral fuels	29.12	19.68	11.47	4.19	-3.33	-5.00	-3.41	-5.60	-5.75
Coal	-9.87	-11.23	-11.29	-11.71	-6.66	-2.91	-4.38	-4.25	-2.53
Oil and gas	37.03	25.47	16.33	9.22	-0.89	-6.99	-1.61	-12.15	-27.29
Construction materials	3.26	3.97	4.06	5.23	5.13	3.55	3.50	1.59	0.51
Other nonmetallic minerals	13.07	11.32	9.51	10.20	9.94	8.76	13.16	20.53	29.70

Note: A minus sign (-) indicates a net export.

Source: Based on appendix A, tables A2, A3, A4, and A9; and figures for roundwood-fuelwood not published separately in this report.

CHART 7.-AVERAGE ANNUAL GROSS IMPORTS AND EXPORTS OF RAW MATERIALS FOR THE UNITED STATES: 1900-1977

(IMPORTS AND EXPORTS MEASURED IN CONSTANT 1972 DOLLARS)



EXPORT-PRODUCTION AND IMPORT-CONSUMPTION RATIOS

Another way to study the impact of foreign trade on our domestic economy is by setting up ratios of exports to production and imports to consumption. Table 9 shows such ratios for 5-year periods 1900-1974 and for 1975-1977. It should be remembered that the import and export totals include not only crude forms of the specified materials, but insofar as possible also such materials incorporated in semi-finished and finished manufactured goods. Thus, in 1977, about 12 percent of the imports of iron into the United States was in the form of imported machinery, including transportation equipment. Correspondingly, about 40 percent of iron exports was in such forms. Similar percentages for copper in 1977 are for imports 20 percent, and for exports 43 percent. Likewise, such percents for aluminum are, for imports 3 percent and for exports 24 percent.

For all raw materials, except gold, it is notable that a decline is shown in the export-production ratios from nearly 12 percent at the beginning of this century, to less than 7 percent in 1940-1944. Subsequently, a rise is shown to a peak of 15 percent in 1975-1977. In contrast, the import-consumption ratio rises from 7 in the first decade of the century, to between 11 and 13 percent from 1915 to 1944, and thereafter continues to rise to about 16 percent in the 1960's and to 23 percent in 1975-1977.

Cotton was the largest component of the 22 percent of crops exported at the beginning of the century, but wheat was the largest component of the 40 percent of crops exported in the late 1970's. (Note that these net crops production and consumption figures do not include crops used domestically for animal feed, other than feed for horses.) Throughout most of this century, major components of crops imports are coffee, sugar, and crude rubber.

For iron and ferroalloy ores the import-consumption ratios increase from 12 percent in 1905-1909 to over 72 percent for 1975-1979; for iron ore the 1975-1979 ratio is 63 percent and for ferroalloy ores 89 percent (see Appendix A, Table A-9). The import-consumption ratios are consistently high for the other metal ores, except gold, group varying in 1975-1979 from 34 percent for lead, 39 percent for copper, 65 percent for zinc, 79 percent for miscellaneous metals, and 81 percent for silver, to 120 percent for aluminum.

For mineral fuels the export-production ratios are consistantly low for all years, although they have increased somewhat for coal after the mid 1940's. Moreover, the small production of oil and gas at the beginning of the century was correlated with a 24 percent export-production ratio for 1900-1905. This ratio declined to 2 percent after the 1950's. But the oil and gas import-consumption ratio again dominates, at 0.1 percent in 1900-1905, 5 percent in 1935-1945, and up to 38 percent in 1975-1977.

Table 9. Exports as Percent of Production and Imports as Percent of Consumption for Raw Materials in the United States by Broad Product Groups, for 5-Year Periods 1900 to 1974 and for the Period 1975 to 1977

Material	Ratio[1]	1975-1977	1970-1974	1965-1969	1960-1964	1955-1959	1950-1954	1945-1949	1940-1944	1935-1939	1930-1934	1925-1929	1920-1924	1915-1919	1910-1914	1905-1909	1900-1904
All raw materials, except gold	E/P	14.8	13.2	10.9	10.9	9.2	7.6	7.8	6.6	7.3	8.4	10.6	10.6	11.6	9.6	10.2	11.5
	I/C	22.6	19.5	16.5	15.3	14.7	13.5	11.7	11.3	12.5	11.2	12.5	11.6	13.1	8.4	7.2	7.1
Agricultural materials	E/P	18.4	16.8	13.3	13.2	10.2	8.3	7.9	5.7	6.1	8.0	10.7	11.5	12.9	10.0	11.6	13.7
	I/C	12.6	12.6	11.9	12.1	11.5	11.8	11.2	11.2	13.8	11.9	14.0	12.3	11.7	9.5	8.2	7.9
Crops	E/P	39.6	40.5	32.0	31.3	23.4	19.0	15.8	7.9	13.6	18.9	22.3	21.5	19.8	19.2	20.0	22.1
	I/C	27.9	27.0	25.5	26.5	26.6	26.1	23.6	21.9	25.8	23.7	24.6	21.6	17.5	15.2	14.6	14.3
Livestock	E/P	3.5	3.2	2.9	3.5	3.0	2.2	3.2	4.5	0.9	1.5	2.5	4.4	7.7	2.7	5.2	7.3
	I/C	5.2	5.6	5.3	5.0	3.8	3.7	3.7	4.5	5.5	4.5	6.8	5.9	7.4	5.3	3.6	3.2
Fishery and wildlife products	E/P	21.7	19.7	12.4	7.4	5.7	4.4	4.7	4.8	5.7	6.3	6.5	8.7	11.3	10.1	7.7	7.9
	I/C	61.5	62.3	59.7	49.6	39.9	35.5	27.9	23.1	28.0	29.0	29.7	31.7	30.3	29.5	25.3	23.6
Fishery products	E/P	12.9	11.8	6.6	3.8	3.3	2.6	3.4	4.4	3.3	3.6	4.4	6.6	9.3	5.1	4.2	4.2
	I/C	60.7	61.8	58.8	48.2	38.3	31.8	20.3	14.7	18.4	20.3	21.0	25.2	24.7	24.6	19.5	16.0
Wildlife products	E/P	86.0	77.5	55.9	36.1	22.9	20.0	20.7	9.5	31.7	33.3	35.6	35.9	46.9	48.4	38.2	45.8
	I/C	80.3	72.3	71.1	62.4	51.4	58.7	70.3	66.7	74.4	70.7	78.4	74.0	78.5	63.3	62.2	69.7
Forest products	E/P	12.4	11.5	8.6	5.5	3.8	3.1	2.7	2.3	4.6	6.1	6.5	4.7	3.1	5.2	4.5	4.6
	I/C	20.2	19.9	15.9	13.7	11.1	9.6	6.9	5.1	5.2	5.2	5.7	4.4	3.0	2.2	1.8	1.3
Sawlogs	E/P	13.8	12.2	8.4	4.5	2.7	2.2	2.0	1.5	4.3	7.3	7.1	5.2	3.3	5.6	4.1	3.9
	I/C	21.6	20.2	15.3	13.1	9.5	7.9	4.5	3.4	2.5	3.5	4.9	4.5	3.5	2.4	2.2	1.7
Pulpwood	E/P	19.7	18.2	14.4	12.2	7.7	4.8	4.6	8.8	8.4	6.8	6.1	6.5	7.8	2.9	3.4	2.3
	I/C	30.9	31.0	30.9	31.2	31.1	35.6	39.6	38.1	53.9	55.8	57.3	52.5	39.0	38.2	30.5	26.3
Other forest products	E/P	3.9	4.8	5.3	4.3	4.8	4.7	3.4	2.7	4.8	5.1	5.5	3.7	2.8	4.7	5.1	5.7
	I/C	8.4	9.6	6.0	3.5	2.5	0.7	0.1	0.1	0.1	0.1	0.1	0.1	-	-	-	-
Minerals, except gold	E/P	8.5	7.9	7.6	8.2	9.0	7.8	9.5	10.4	11.6	10.8	13.0	11.9	13.6	12.4	11.2	10.7
	I/C	34.1	26.4	20.9	19.2	19.8	16.6	12.9	12.8	10.8	10.1	11.2	12.4	9.3	8.3	7.4	9.0
Iron and ferroalloy ores	E/P	53.6	46.1	37.9	46.8	34.1	17.8	24.4	24.5	33.3	18.4	12.0	12.5	19.7	14.4	7.8	6.6
	I/C	72.5	65.2	59.6	62.1	59.0	41.4	36.6	32.6	35.1	29.4	19.7	14.9	17.9	17.5	12.0	23.3
Other metal ores	E/P	35.5	33.4	38.5	38.9	32.7	27.6	35.0	41.8	44.9	66.9	66.7	67.1	62.0	70.5	36.0	35.4
	I/C	62.3	54.8	52.1	50.3	66.4	63.1	61.4	63.1	78.0	89.4	66.6	72.2	54.9	65.2	62.7	59.6
All mineral fuels	E/P	4.0	3.7	3.8	3.8	6.4	6.2	7.3	6.5	8.1	7.5	8.1	7.4	7.0	6.3	6.5	5.3
	I/C	32.0	22.7	15.5	14.1	11.9	8.4	4.9	2.6	2.6	3.8	3.8	6.0	2.0	0.8	0.4	0.8
Coal	E/P	9.3	10.4	9.6	9.6	12.7	8.7	8.2	4.5	3.1	3.2	4.2	4.9	4.6	4.1	3.1	3.1
	I/C	0.5	0.4	0.1	0.1	0.2	0.2	0.1	0.2	0.3	0.4	0.3	0.4	0.3	0.4	0.5	0.9
Oil and gas	E/P	2.2	1.9	2.1	2.1	4.2	5.1	6.7	8.2	12.2	12.0	14.0	13.2	16.6	17.5	18.6	23.9
	I/C	38.4	26.9	18.8	17.2	15.0	11.4	7.9	4.7	4.6	7.4	9.5	18.2	9.5	3.2	0.2	0.1
Construction materials	E/P	1.2	0.8	0.7	0.4	0.3	0.4	0.6	0.5	0.3	0.2	0.2	0.8	0.9	1.0	0.5	2.1
	I/C	4.5	4.8	4.4	4.9	5.0	6.3	6.2	4.9	4.3	3.1	4.0	3.7	2.8	2.3	1.9	1.5
Other nonmetallic minerals	E/P	20.1	19.4	16.7	15.5	12.8	10.2	10.5	8.6	14.3	14.5	13.2	11.2	5.6	12.2	9.8	10.0
	I/C	30.6	28.3	25.1	23.0	21.6	19.7	17.1	20.4	22.8	21.0	24.5	23.2	20.4	35.6	33.9	40.0

[1]E/P represents exports as a percent of production; I/C represents imports as a percent of consumption.

Source: Based on table 5. and A9.

CHAPTER 4.—Raw Materials Trends in the 1970's

The 8 years for which statistics are included for the first time in this report are perhaps the period of most striking change for raw materials of any in this century. Chart 8 shows five indicators of this change for 6 of the largest groups of raw materials. These percent changes, expressed as relatives to the 1969 figures, are also tabulated in Table 10.

For crops, the greatest range in production occurs, from a decline in 1970 of 8 percent below 1969 to an increase in 1977 of 38 percent over 1969. This increased production reflects the high increase in exports, to 90 percent above exports in 1969. This is the greatest increase in exports shown in the chart for any group of raw materials. This increase primarily reflects the near doubling of exports of oil crops, feed grains, and food grains. Import ratios to 1969 for crops have also increased from 1 percent in 1970 to 22 percent in 1976 and to 15 percent in 1977, reflecting primarily the increase in imports of oil crops. This, however, is much less than the import increases in many nonagriculture areas. Consumption of crops has changed very little, varying in the period from 3 percent below 1969 to 5 percent above. The price of crops has risen somewhat more than for any other raw materials group shown in the chart, except for mineral fuels, the increase amounting to 131 percent. This reflects the very high increase in prices of coffee, cocoa, oil crops, and cotton.

There is much less variation in the indicators for livestock. Nevertheless, the production drop of 14 percent for 1973 is the greatest decline shown in the chart. This decline was centered in meat animals. The 39 percent increase in livestock exports is associated with a 132 percent increase in exports of poultry and eggs and a 40 percent increase in exports of meat animals, accompanied by a 34 percent drop in exports of dairy products.

The increase in foreign trade is notable for forest products: an increase to 37 percent above 1969 for imports in 1977, and an increase to 28 percent for exports in 1973 and to 20 percent for exports in 1977. These factors reflect an increase for sawlogs of 63 percent above 1969 for imports and a 33 percent increase for exports. The price increase of 125 percent is nearly as much as that for crops.

During the 1969-1977 period, fishery products increased in production by 17 percent, in consumption by 8 percent, and in price by 167 percent. Wildlife products in the same period showed a production increase of 5 percent, a decrease in consumption of 36 percent, and a price increase of 74 percent.

For metallic minerals a decline in production from 1969 is shown for 5 of the 8 years, with a maximum decline of 12 percent in 1977. This is accompanied by an increase in consumption of 9 percent for 1977. For the same year, imports increased over 1969 by 34 percent and exports declined by 10 percent. For iron ore the decline in production was 36 percent, with greater decline shown for each year after 1973. Consumption of iron declined between 1969 and 1977 by 4 percent. For ferroalloy ores, production increased by 8 percent over the same period, but consumption increased by 33 percent. For nonferrous metals, production in 1977 was about the same as in 1969, but 9 percent below the peak production of these metals in 1970. Meanwhile, consumption of these metals increased by 10 percent between 1969 and 1977. For copper, production in 1977 was less than 3 percent below that of 1969, but this was 13 percent below the peak production of 1970. Copper consumption increased about 3 percent between 1969 and 1977 and 17 percent between 1969 and 1976. Aluminum consumption increased 67 percent between 1969 and 1977, accompanied by an increase of 62 percent in imports. The price of metals increased by 112 percent between 1969 and 1977 as compared with 193 percent for all minerals. For iron and ferroalloys between the same years the price increase was 146 and for other metals 85 percent.

For mineral fuels, only a slight decline in production is shown between 1969 and 1977, but production was lower than in 1969 during all of the last 4 years and lowest in 1976. Meanwhile, consumption increased by 22 percent between 1969 and 1977, imports by 165 percent, and prices by 231 percent. For some of the major mineral fuels these changes are even more striking. Crude petroleum production declined by 11 percent between 1969 and 1977, after reaching an alltime peak in 1970 of 4 percent above 1969; consumption, however, increased between 1969 and 1977 by 31 percent and imports increased by 166 percent. For natural gas, production declined 4 percent and consumption 5 percent. This was after passing an alltime peak production of natural gas in 1973 of 9 percent above 1969. Consumption of all oil and gas products combined increased 22 percent between 1969 and 1977 and the price of oil and gas increased by 220 percent. With the developing shortage of oil and gas, production of coal increased throughout most of the period, attaining by 1977 a level 21 percent above that of 1969. This was the highest production of coal since 1947. Consumption of coal increased by 22 percent between 1969 and 1977 and the price of coal increased by 317 percent.

For construction, chemical, and other minerals production increased by 7 percent and consumption by 10 percent, while imports increased by 44 percent and exports by 40 percent. For construction materials alone, both production and consumption increased by only 2.5 percent; but for other nonmetallics, production increased by 17 percent, consumption by 26 percent and imports by 56 percent.

Direct energy production and consumption increased by 21 percent between 1939 and 1974, but was 12 percent below the 1969 level in 1977.

CHART 8.-RAW MATERIALS TRENDS IN THE UNITED STATES: 1970-1977

(Figures for 1970 through 1977 expressed as percent increases over those for 1969)

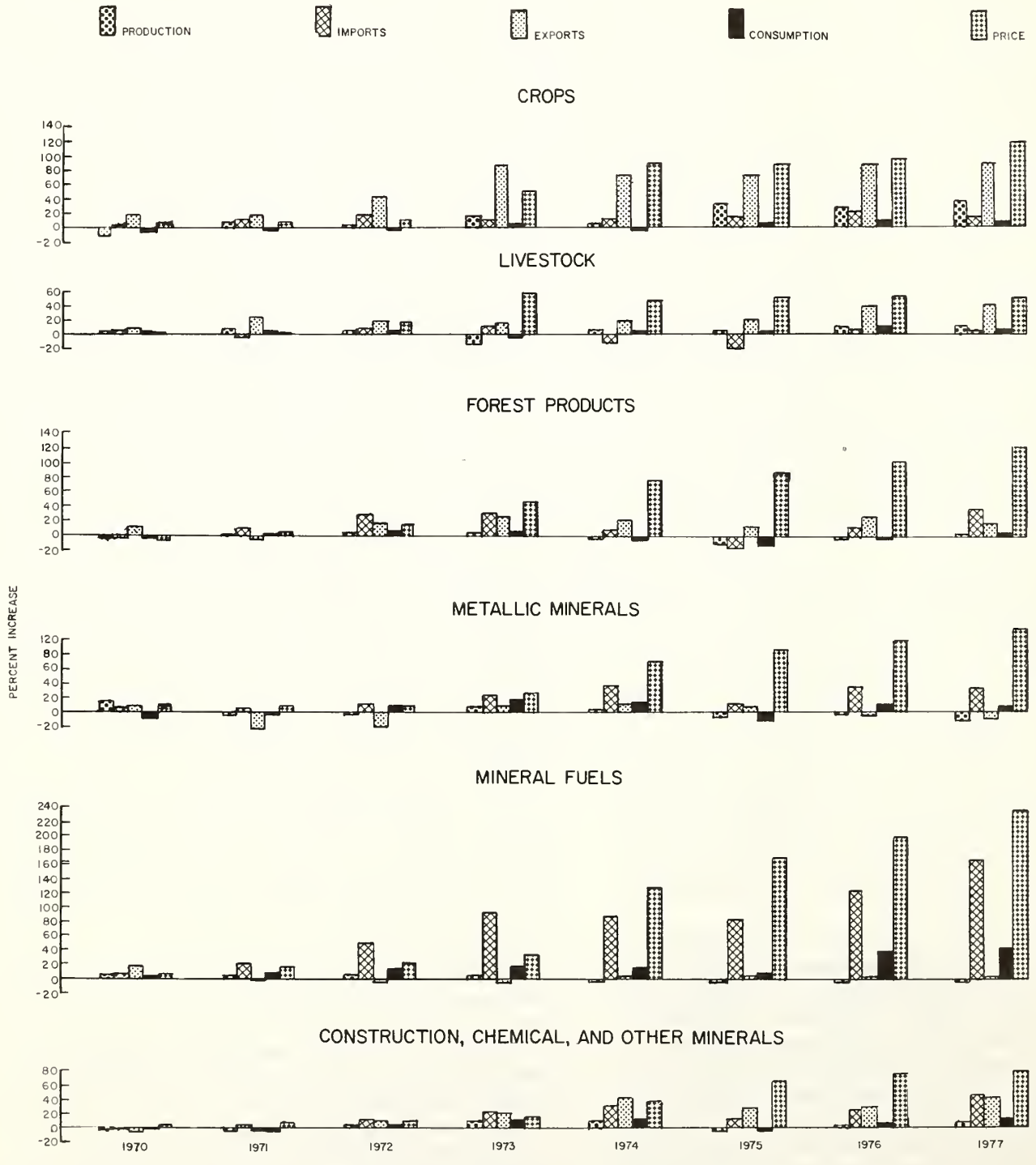


TABLE 10. **Percent Increase Over 1969 for Production, Imports, Exports, Consumption and Prices of Raw Materials, by Source Classes: 1970 to 1977**

Material	Year	Production	Imports[1]	Exports[1]	Consumption	Price[1]
All raw materials	1977	10.4	60.0	55.6	10.4	126.4
	1976	8.3	48.4	55.3	9.0	108.0
	1975	6.1	26.3	45.2	1.5	93.1
	1974	3.2	33.4	46.0	5.6	78.2
	1973	5.1	37.6	53.8	6.7	44.8
	1972	3.8	24.7	23.8	6.1	14.9
	1971	3.9	8.9	9.8	2.8	6.9
	1970	0.6	2.9	15.4	0.1	2.3
Crops	1977	38.2	14.9	89.6	2.4	130.7
	1976	27.4	21.9	87.4	5.0	94.3
	1975	33.5	17.1	72.4	2.4	80.7
	1974	5.5	10.3	71.8	-0.6	89.8
	1973	18.2	15.8	87.4	3.5	54.5
	1972	4.1	18.7	41.6	1.0	13.6
	1971	6.7	8.7	19.7	-0.4	8.0
	1970	-8.5	1.0	19.7	-2.8	3.4
Livestock	1977	9.0	1.8	39.2	7.1	51.2
	1976	8.9	4.7	37.3	7.0	51.2
	1975	2.4	-15.3	17.1	1.2	48.8
	1974	4.4	-10.0	16.0	2.6	43.0
	1973	-14.2	10.2	17.3	-1.9	57.0
	1972	3.9	9.3	18.3	3.7	16.3
	1971	5.2	-2.8	23.2	4.0	0.0
	1970	2.2	6.0	6.2	1.7	1.2
Fishery and wildlife products	1977	15.0	2.1	45.2	4.5	155.4
	1976	9.6	5.5	32.2	5.2	122.0
	1975	-4.6	-9.6	19.9	-9.6	81.1
	1974	-1.8	-9.0	13.7	-7.6	84.8
	1973	-5.5	-0.4	34.2	-5.5	79.3
	1972	1.0	18.4	17.8	10.4	90.1
	1971	3.5	-3.9	5.5	-1.3	6.8
	1970	10.9	-2.3	0.7	3.5	-0.1
Forest products	1977	2.0	37.1	19.5	6.1	124.7
	1976	-0.4	14.1	27.1	-0.6	102.4
	1975	-9.7	-12.4	12.2	-12.4	78.8
	1974	-2.7	8.4	20.3	-3.4	70.6
	1973	3.9	30.7	27.6	6.1	47.1
	1972	2.2	29.2	17.6	5.3	17.6
	1971	0.1	9.8	-4.7	2.1	4.7
	1970	-1.5	-3.0	13.4	-3.2	-8.2
Metallic minerals	1977	-11.5	34.1	-10.1	9.0	112.1
	1976	-2.0	35.2	-1.0	8.6	98.9
	1975	-7.4	10.4	6.0	-14.6	83.5
	1974	1.0	38.6	11.1	14.0	69.2
	1973	5.6	25.1	6.3	17.0	24.2
	1972	-0.2	12.5	-17.6	9.9	9.9
	1971	-1.8	4.3	-20.2	-0.2	7.7
	1970	7.2	4.3	9.0	-7.3	9.9
Mineral fuels	1977	-2.6	164.8	2.1	21.8	231.4
	1976	-3.0	122.6	2.3	17.5	196.5
	1975	-2.6	83.8	4.9	8.9	169.8
	1974	-0.3	87.2	1.4	13.2	126.7
	1973	3.0	90.7	-3.8	17.0	33.7
	1972	4.6	46.3	-3.7	11.7	16.3
	1971	2.9	21.4	-2.8	5.4	14.0
	1970	5.2	5.9	18.9	2.6	5.8
Construction, chemical, and other minerals	1977	7.3	44.4	40.4	10.4	79.8
	1976	2.3	25.0	26.4	3.1	74.8
	1975	-2.7	10.2	28.6	-3.2	66.0
	1974	9.2	32.6	41.1	10.5	36.0
	1973	10.6	23.1	21.4	12.1	15.6
	1972	1.4	12.0	11.8	2.5	10.3
	1971	-2.9	0.7	-1.4	-2.5	7.5
	1970	-1.5	-0.5	-3.2	-1.8	2.9
Direct energy	1977	-11.7	-	-	-11.7	(NA)
	1976	14.3	-	-	14.3	(NA)
	1975	20.7	-	-	20.7	(NA)
	1974	20.8	-	-	20.8	(NA)
	1973	9.3	-	-	9.3	(NA)
	1972	9.3	-	-	9.3	(NA)
	1971	6.4	-	-	6.4	(NA)
	1970	-1.1	-	-	-1.1	(NA)

Source: Based on tables A1, A2, A3, A4, and B1.

NA Not available.

[1]Excludes gold.

CHAPTER 5.—Foods

As we have already seen in Chapter 2, about one-half of all raw materials are used for human foods. This proportion rises somewhat in periods of depression, having reached a peak of 59 percent in 1932, but no significant increasing or decreasing trend is indicated for this ratio. The lowest single year is 1916 at 44 percent, and the next lowest 1973 at 45 percent of all raw materials. Average annual consumption of food has not reached 50 percent of all raw materials since 1963, and was also 50 percent in 1900 (see Table A5).

PER CAPITA FOOD CONSUMPTION

The upper section of Chart 9 (also Tables 2 and 11) shows food consumption on a per capita basis. A small increase in per capita food consumption is indicated for recent years, but this increase is confined to livestock and fishery products. Per capita consumption of crops was essentially the same in 1977, 1950, and 1936, about $55.5. In the same period livestock consumption had risen to $148 in 1977, from $138 in 1950, and $123 in 1936; and fishery products consumption in 1977 was $7.9, an increase from $6.8 in 1950, and $5.4 in 1936.

KINDS OF FOOD CONSUMED

For the last 18 years, Table 12 shows the distribution of foods by kind, measured in constant 1972 dollars. For most of the series, the percent of total changes very little. The most significant changes are the increase in oil crops from 2.3 percent of the total in 1960 to 4.4 percent in 1977; the decrease over the same period in coffee, cocoa, and tea from 4.8 percent of the total to 3.0 percent; and the decrease in dairy products and honey from 18.5 percent to 14.6 percent. Details of the composition of these classes are given for 1972 in the footnote to Table 12.

An approximately comparable distribution in terms of pounds of food consumed is shown in Table 13. Crops represent a greater relative percent of the total measured in terms of pounds, than in terms of value at the point of first market. The longer series available in this table points up the decline in consumption of grains from 16.6 percent of the total in 1920 to 10.1 percent in 1977, increases in fruits from 10.1 to 13.5 percent, in oil crops from 1.3 to 4.0 percent, and in sugar from 6.6 to 9.9 percent. In the same period meat animals have gone up from 10.2 to 14.1 percent, poultry and eggs from 3.6 to 6.5 percent, and dairy products have declined from 26.5 to 20.6 percent.

Information on the major nutrients supplied by foods is summarized in Table 14 for the period 1910-1977. Very little change throughout the period is indicated for per capita calorie consumption. Per capita per day protein consumption is shown as 102 grams in 1910 and 103 grams in 1976 and 1977. This protein consumption is somewhat lower in certain intervening years, dropping to 93 grams for 1920, 1930, and 1940. Consumption of fat by contrast, shows a significant increase from 125 grams in 1910 and 123 grams in 1920 to 143 grams in 1960 and 158 grams in 1977. Meanwhile, carbohydrates consumption dropped from 496 grams in 1910 to 375 grams in 1960 and to 391 grams in 1977. Nutrition balance points are shown in Table 14, for 1910 at (.141, .173) and for 1977 at (.158, .242). The optimum balance point has sometimes been estimated as (.14, .14), indicating that current protein levels are somewhat too high and current fat levels very much too high.

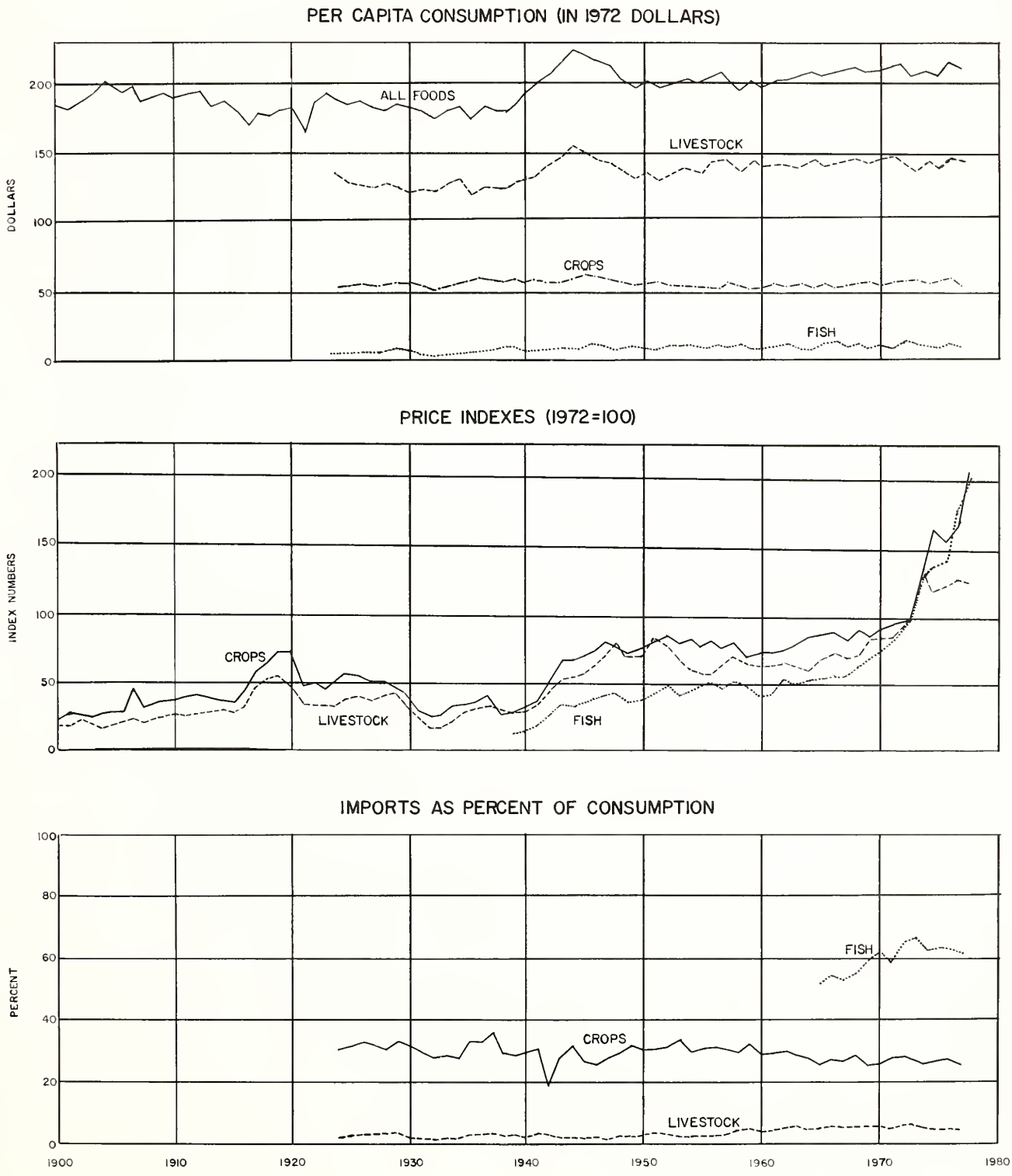
FOOD PRICES

Since 1974 the average price of foods has risen less than the average for all wholesale commodities. Prior to that time, for two decades, price rises for food were generally the same or greater than for all wholesale prices. During the period 1939-1952 price increases for foods exceeded those for all wholesale prices and this was true also in the first decade of the century (see Chart 9 and Table B1). In recent years food crops prices have risen much more rapidly than prices of livestock foods (see Table 15), crops reaching an index of 209, with 1972 as index base, compared with 129 for livestock foods in 1977. This was a reversal from earlier years. Fishery foods prices have generally risen more rapidly than all food prices reaching 203 in 1977, and more rapidly than either the prices of crops or livestock.

FOREIGN TRADE IN FOODS

Foreign trade in livestock foods has usually been relatively small, although imports as a percent of consumption have increased somewhat in recent years. This import-consumption ratio was only 0.8 percent in 1947 and 1.5 percent in 1955

CHART 9.-FOOD CONSUMPTION, PRICES, AND IMPORTS IN THE UNITED STATES: 1900-1977



and 1956, but increased to 5.8 percent in 1973 and to 4.7 percent in 1977 (see Chart 9). Exports as a percent of production are even smaller.

For food crops, foreign trade is much more significant, amounting for imports to 25.9 percent of consumption in 1977, down from a peak of 33.0 percent in 1953. These imports are primarily coffee, cocoa, oil crops, and fruits. Exports of food grains in recent years have amounted to about one-half of gross food grain production, and this ratio was even higher in 1960. Exports of oil crops amounted to over 40 percent of gross production in the last two years. This was up from 23 percent in 1960.

For fishery products, the major portion of fish consumed for food (excluding recreational fishing) was imported. These imports amounted to 61 percent of consumption in 1977, to 66 percent in 1973, and to 51 percent in 1965. Exports of all fishery products in recent years amounted to less than 13 percent of production and to only 3 or 4 percent prior to the mid 1960's.

TABLE 11. Per Capita Consumption of Foods in the United States, by Broad Source Classes: 1924 to 1977

(In constant 1972 dollars)

Year	Per capita consumption for food				Year	Per capita consumption for food			
	All foods	Crops	Livestock products	Fishery products		All foods	Crops	Livestock products	Fishery products
1977	211.5	55.5	148.1	7.9	1949	198.7	55.1	136.7	6.8
1976	214.5	57.3	149.3	8.0	1948	201.0	55.8	137.8	7.4
1975	205.5	57.0	141.7	6.8	1947	211.7	59.2	145.6	6.8
1974	207.7	55.2	145.3	7.2	1946	217.4	61.1	147.2	9.0
1973	203.6	56.5	139.7	7.4	1945	221.4	62.0	149.9	9.5
1972	213.1	56.6	148.5	8.1	1944	224.9	61.1	156.2	7.5
1971	212.3	55.1	150.0	7.2	1943	213.0	56.2	149.2	7.5
1970	209.8	54.7	147.8	7.3	1942	205.6	57.9	140.9	6.9
					1941	198.8	59.0	134.0	5.8
1969	209.7	56.1	146.4	7.2	1940	194.0	56.4	132.1	5.4
1968	210.0	54.6	148.1	7.3					
1967	206.1	53.2	146.1	6.8	1939	190.1	57.6	126.6	5.9
1966	203.0	52.2	143.3	7.5	1938	181.4	54.0	121.8	5.7
1965	201.9	52.5	142.3	7.1	1937	181.4	54.8	121.1	5.5
1964	205.6	51.9	147.1	6.6	1936	184.1	55.4	123.3	5.4
1963	203.3	53.0	143.7	6.6	1935	175.6	56.1	114.8	4.7
1962	201.0	52.4	141.5	7.0	1934	187.4	53.2	129.6	4.7
1961	200.5	53.1	141.1	6.3	1933	182.3	51.6	126.2	4.5
1960	199.1	52.4	140.4	6.2	1932	178.8	50.5	124.1	4.2
					1931	183.4	53.4	124.9	5.1
1959	200.5	52.5	141.8	6.2	1930	184.2	54.2	124.1	5.9
1958	197.2	52.0	138.7	6.5					
1957	201.8	52.5	143.1	6.2					
1956	207.4	53.1	147.8	6.5					
1955	204.1	52.3	145.7	6.1	1929	186.9	55.1	125.9	6.0
1954	200.1	52.3	141.3	6.5	1928	184.5	53.3	125.5	5.7
1953	201.4	53.4	141.6	6.5	1927	185.5	52.5	127.3	5.7
1952	199.4	54.3	138.5	6.5	1926	188.5	54.8	128.5	5.2
1951	198.5	55.6	136.7	6.2	1925	186.8	53.6	128.6	4.7
1950	200.7	55.6	138.3	6.8	1924	189.7	52.4	132.2	5.1

Source: Based on tables 2 and A6.

TABLE 12. Percent Distribution of Food Consumption in the United States Measured in Constant 1972 Dollars, by Kind: Decade Years 1930 to 1960 and Annually 1960 to 1977

Year	All foods (million dollars)	Crops (percent of all foods)[1]									Livestock (percent of all foods)[1]				Fishery products (percent of all foods)[1]
		All crops	Grains	Potatoes and beans	Other vegetables	Fruit and tree nuts	Oil crops	Sugar crops	Coffee, cocoa, and tea	Other food crops	All livestock	Meat animals	Poultry and eggs	Dairy products and honey	
1977	45,856	26.2	3.1	1.8	6.7	4.6	4.4	2.4	3.0	0.3	70.0	46.9	8.6	14.6	3.7
1976	46,148	26.7	3.1	1.7	6.6	4.8	4.2	2.2	3.8	0.3	69.6	46.8	8.5	14.3	3.7
1975	43,899	27.8	3.1	1.8	6.9	5.3	4.0	2.5	3.7	0.3	68.9	45.6	8.5	14.8	3.3
1974	44,008	26.6	3.0	1.7	6.9	4.9	3.5	2.5	3.9	0.3	70.0	46.7	8.6	14.6	3.5
1973	42,836	27.7	3.0	1.8	7.1	5.0	3.6	2.7	4.2	0.3	68.6	44.5	8.8	15.3	3.6
1972	44,503	26.5	2.8	1.7	6.6	4.6	3.5	2.9	4.1	0.3	69.7	46.1	8.8	14.8	3.8
1971	43,968	25.9	2.8	1.7	6.6	4.8	3.0	2.7	3.9	0.3	70.6	47.1	8.7	14.8	3.4
1970	42,984	26.1	2.9	1.7	6.7	4.8	3.1	2.7	4.1	0.2	70.5	46.5	8.8	15.1	3.5
1969	42,507	26.8	2.9	1.8	6.8	5.0	3.1	2.8	4.2	0.2	69.8	46.0	8.6	15.2	3.4
1968	42,155	26.0	2.9	1.7	6.8	4.3	2.9	2.7	4.4	0.3	70.5	46.6	8.5	15.4	3.5
1967	40,946	25.8	2.9	1.7	6.6	4.5	2.9	2.5	4.4	0.2	70.9	46.4	8.7	15.7	3.3
1966	39,915	25.7	3.0	1.8	6.7	4.3	2.7	2.5	4.5	0.3	70.6	45.5	8.5	16.5	3.7
1965	39,223	26.0	3.1	1.8	6.8	4.6	2.5	2.5	4.6	0.3	70.5	45.1	8.3	17.1	3.5
1964	39,464	25.3	3.0	1.8	6.5	4.2	2.4	2.6	4.6	0.2	71.5	46.5	7.9	17.1	3.2
1963	38,466	26.1	3.0	1.8	6.6	4.6	2.2	2.9	4.7	0.2	70.7	45.4	7.9	17.4	3.3
1962	37,478	26.1	3.0	1.8	6.8	4.4	2.4	2.7	4.8	0.2	70.4	44.4	8.1	17.9	3.5
1961	36,840	26.5	3.0	1.8	6.8	4.8	2.4	2.7	4.8	0.2	70.4	44.2	8.1	18.0	3.2
1960	35,971	26.3	3.0	1.9	6.9	4.8	2.3	2.6	4.8	0.2	70.5	44.5	7.6	18.5	3.1
1950	30,563	27.7	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	68.9	(NA)	(NA)	(NA)	3.4
1940	25,721	29.1	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	68.1	(NA)	(NA)	(NA)	2.8
1930	22,769	29.4	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	67.3	(NA)	(NA)	(NA)	3.2

(NA) Not available.

[1]For 1972, the composition of these classes in millions of dollars is:

Grains:		Oil crops:		Meat animals:	
Wheat	817	Soybeans	827	Cattle and calves	13,764
Corn	315	Peanuts	301	Hogs	6,416
Rice	88	Other oils	410	Sheep and lambs	343
Other	48	Sugar crops	1,282	Poultry and eggs:	
Potatoes and beans:		Coffee, cocoa, and tea:		Chickens	1,771
Potatoes and sweetpotatoes	635	Coffee	1,495	Turkeys	487
Dry beans and peas	129	Cocoa	267	Eggs	1,639
Other vegetables	2,923	Tea	74	Dairy products and honey:	
Fruit and tree nuts:		Other food crops:		Dairy products	6,532
Bananas	211	Spices	55	Honey	55
Other fruit	1,608	Cocoanut	12	Fishery products:	
Tree nuts	248	Other	68	Finfish	865
				Shellfish	817

Source: Table A6, A7, A8 and unpublished detail included in these tables.

TABLE 13. Approximate Distribution of Food Consumption in the United States Measured in Pounds, by Kind: Decade Years 1920 to 1970 and Annually 1970 to 1977

Year	Approximate pounds per capita	Crops (percent of all foods)								Livestock (percent of all foods)				Fishery products (percent all foods)
		All crops	Grains	Potatoes and beans	Other vegetables	Fruit	Oil crops	Sugar crops	Coffee, cocoa, and tea	All livestock	Meat animals	Poultry and eggs	Dairy products	
1977	1,368	57.9	10.1	9.7	9.7	13.5	4.0	9.9	1.0	41.2	14.1	6.5	20.6	0.9
1976	1,381	57.7	10.3	9.8	9.2	13.5	4.0	9.6	1.3	41.4	14.1	6.4	20.9	0.9
1975	1,351	58.0	10.3	10.0	9.9	13.5	3.9	9.2	1.2	41.1	13.5	6.3	21.3	0.9
1974	1,352	57.2	10.2	9.4	9.5	13.6	3.8	9.4	1.3	41.9	14.1	6.4	21.3	0.9
1973	1,360	57.6	10.3	9.4	9.4	13.7	3.9	9.4	1.4	41.5	13.1	6.4	22.0	0.9
1972	1,378	56.4	10.2	9.2	9.5	13.2	3.8	9.2	1.4	42.7	14.0	6.6	22.1	0.9
1971	1,374	56.4	10.3	9.5	9.4	13.3	3.5	9.0	1.3	42.7	14.3	6.6	21.9	0.8
1970	1,374	56.4	10.3	9.6	9.4	13.3	3.6	8.9	1.3	42.7	14.0	6.5	22.2	0.9
1960	1,390	54.6	10.6	10.2	8.8	13.1	2.5	8.0	1.4	44.6	12.5	5.6	26.6	0.7
1950	1,442	55.1	11.6	10.6	8.8	12.8	1.9	7.9	1.5	44.1	10.9	5.2	28.0	0.8
1940	1,455	58.0	13.6	11.9	10.2	12.2	1.4	7.3	1.4	41.2	10.8	4.0	26.4	0.8
1930	1,458	59.2	15.3	10.2	11.0	11.9	1.3	8.4	1.2	40.1	9.7	4.1	26.2	0.7
1920	1,444	58.8	16.6	11.0	12.1	10.1	1.3	6.6	1.1	40.4	10.2	3.6	26.5	0.8

Source: Based on Department of Agriculture figures for civilian per capita consumption of major food commodities, see Agriculture Handbook No. 356, Vol. 5, April 1972. The detail included is: Grains, cornmeal and other corn products except syrup and sugar, oat food products, barley food products, wheat flour, wheat breakfast cereals, rye flour, and milled rice; Potatoes and beans, fresh equivalent of potatoes and sweetpotatoes and dry edible beans; Other vegetables, fresh (including home gardens), canned, and frozen, and melons; Fruit, fresh (farm weight), canned, frozen, and dried; Oil crops, fat content of fats and oils except butter and lard; Sugar crops, refined sugar and corn syrup and sugar; Coffee, cocoa, and tea, green coffee beans, cocoa beans, and tea; Meat animals, carcass weight of beef, veal, lamb, mutton, and pork (including lard); Poultry and eggs, eggs, farm basis converted to pounds, chicken and turkey ready-to-cook; Dairy products, fluid milk and creams, condensed and evaporated whole milk, butter, cheese, and ice cream; Fishery products, edible weight of fresh, frozen, canned, and cured.

TABLE 14. Some Nutrients Consumed Per Capita Per Day in the United States: Decade Years 1910 to 1970 and Annually 1970 to 1977

Year	Nutrients available per capita, per day				Nutrition balance point[1]	
	Food energy (calories)	Protein (grams)	Fat (grams)	Carbohydrate (grams)	n^1 (protein)	n^2 (fat)
1977	3,370	103	158	391	.158	.242
1976	3,380	103	159	390	.158	.244
1975	3,250	99	152	377	.158	.242
1974	3,280	100	156	376	.158	.247
1973	3,300	99	155	385	.155	.243
1972	3,320	101	158	381	.158	.247
1971	3,320	101	157	381	.158	.246
1970	3,300	100	156	380	.157	.246
1960	3,140	95	143	375	.155	.233
1950	3,260	95	145	402	.148	.226
1940	3,350	93	143	429	.140	.215
1930	3,440	93	134	474	.133	.191
1920	3,290	93	123	459	.138	.182
1910	3,490	102	125	496	.141	.173

Source: U.S. Dept. of Agriculture, Agricultural Resource Service, National Food Situations. Represents civilian consumption only.

[1]The optimum balance point has been estimated as (.14, .14).

TABLE 15. Price Indexes for Foods by Source Classes in the United States: 5-Year Periods and Selected Years: 1900 to 1977

(1972=100)

Year or period	Foods by source classes[1]				Year or period	Foods by source classes[1]			
	All foods	Agricultural foods		Fishery foods		All foods	Agricultural foods		Fishery foods
		Crops	Livestock				Crops	Livestock	
1977	153	209	129	203	1945-1949	72	77	71	41
					1940-1944	45	52	44	26
1976	142	167	130	180	1935-1939	31	34	31	[2]14
					1930-1934	26	32	24	(NA)
1975	137	161	127	143					
					1929	43	49	42	(NA)
1970-1974	109	118	106	107					
					1925-1929	43	53	40	(NA)
1970	88	92	87	76	1920-1924	40	54	36	(NA)
1965-1969	80	90	77	63	1920	54	74	49	(NA)
1960-1964	69	80	67	50					
1955-1959	70	81	66	51	1915-1919	44	55	42	(NA)
1950-1954	78	86	76	47	1910-1914	29	38	27	(NA)
					1905-1909	23	32	21	(NA)
1950	75	80	74	44	1900-1904	20	25	19	(NA)

(NA) Not available.

[1]For sources see appendix B. The figures are from table B1 or the worksheets from which it was developed.
[2]Represents 1939 only.

CHAPTER 6.—Energy Materials

In 1977, for the first time in our history, we expended 30 percent of our raw materials for energy purposes. This was up from only 22 percent of our raw materials used for energy in the first decade of this century. Moreover, only 23 percent of our raw materials sufficed for energy during the second world war. The choice of energy materials as the raw material, except food, that our economy most desires to use is particularly a phenomenon of the last decade. Energy use as a percent of all raw materials use reached 28 percent for the first time in 1970 and has since remained above that figure. Prior to 1966, we had expended 25 percent or less of our raw materials for energy throughout the century, except for an increase of one or two percent in the period 1916-1921. Is this increase due to two cars for almost every family and an air-conditioner in almost every building? Or have we shifted to more energy intensive industrial processes? This report does not try to answer these questions. However, it may be noted that the number of cars in use increased between 1960 and 1977 from 56.9 million to 99.9 million, an increase of 76 percent, and the number of trucks increased from 10.8 million to 28.2 million. In the same period population increased by only 20 percent. Moreover, between 1960 and 1977 the number of homes with room air-conditioners increased from 7.8 million to 41.9 million. For the manufacuring industries, production increased between 1958 and 1977 by 140 percent, while purchased fuels and electric energy used by these industries (measured in Btu) increased by only 54 percent.

PER CAPITAL ENERGY CONSUMPTION

Per capita consumption of energy increased by 74 percent between 1900 and 1977, from $78 per capita to $136. But most of this increase occurred in the first and last two decades of the century (See Chart 10 and Table 16). By 1917, per capita consumption of energy materials had risen to $105, a figure which was not attained again until 1965. The recent rapid rise in per capita energy consumption began in the early 1960's, amounting to a 40 percent increase from 1960-1961 to 1977. Between 1900 and 1917, this ratio had risen by 34 percent. But during the 1950's the per capita energy consumption ratios averaged less than 3 percent higher than those for the 1920's.

KINDS OF ENERGY MATERIALS USED

The sun may be considered the primary source of almost all the energy which we use. Tremendous quantities of its energy are used continually to grow our crops and our forests and to maintain our Earth at a livable temperature. Moreover, it is primarily fossil fuels that we mine for our energy supply. But, as yet, we use very little of the sun's energy directly to replace the energy materials with which we have been accustomed to heat our buildings and supply motive power for our equipment.

The major shifts in our sources of energy materials which have occurred in this century are from feed for horses and fuelwood which accounted for more than half of the cost of our energy materials at the beginning of the century to fossil fuels which supply about 95 percent of our energy today. This is a shift to a depletable source with many limitations on how we can and should supply our needs. Table 16 shows per capita consumption by major sources. In 1977, of the $136 per person used for energy purposes, $106 was supplied by oil and gas, including $83 for crude petroleum, $18 for natural gas, and $5 for natural gas liquids. In the same year $23 per capita was expended for coal as an energy source. Direct energy per capita cost $4, and uranium, fuelwood, and feed for horses $3.

Table 17 (based on Table A5) shows the percent distribution of energy sources, by major kinds, measured in constant 1972 dollars. Table 18 (based on Table A12) shows a comparable distribution in terms of Btu supplied. Both tables indicate that oil and gas provided about three-quarters of the energy materials used in the last two decades and that coal supplied only roughly one-fifth. In the last decades both measures indicate also that sources of energy other than fossil fuels supplied only 5 percent or less of our energy.

MEASURING ENERGY MATERIALS IN DOLLARS AND BTU

The tabulation on page 35 presents on a per capita basis the series developed for total energy use in Tables 17 and 18. For comparison purposes, the percent increase indicated by each of the series is shown.

The somewhat different trends indicated reflect the different weights attached to the individual kinds of energy. By dividing the 1972 energy materials consumption series by the corresponding Btu figures used for Table A12, the following 1972

CHART 10.-ENERGY MATERIALS CONSUMPTION, PRICES, AND IMPORTS IN THE UNITED STATES: 1900-1977

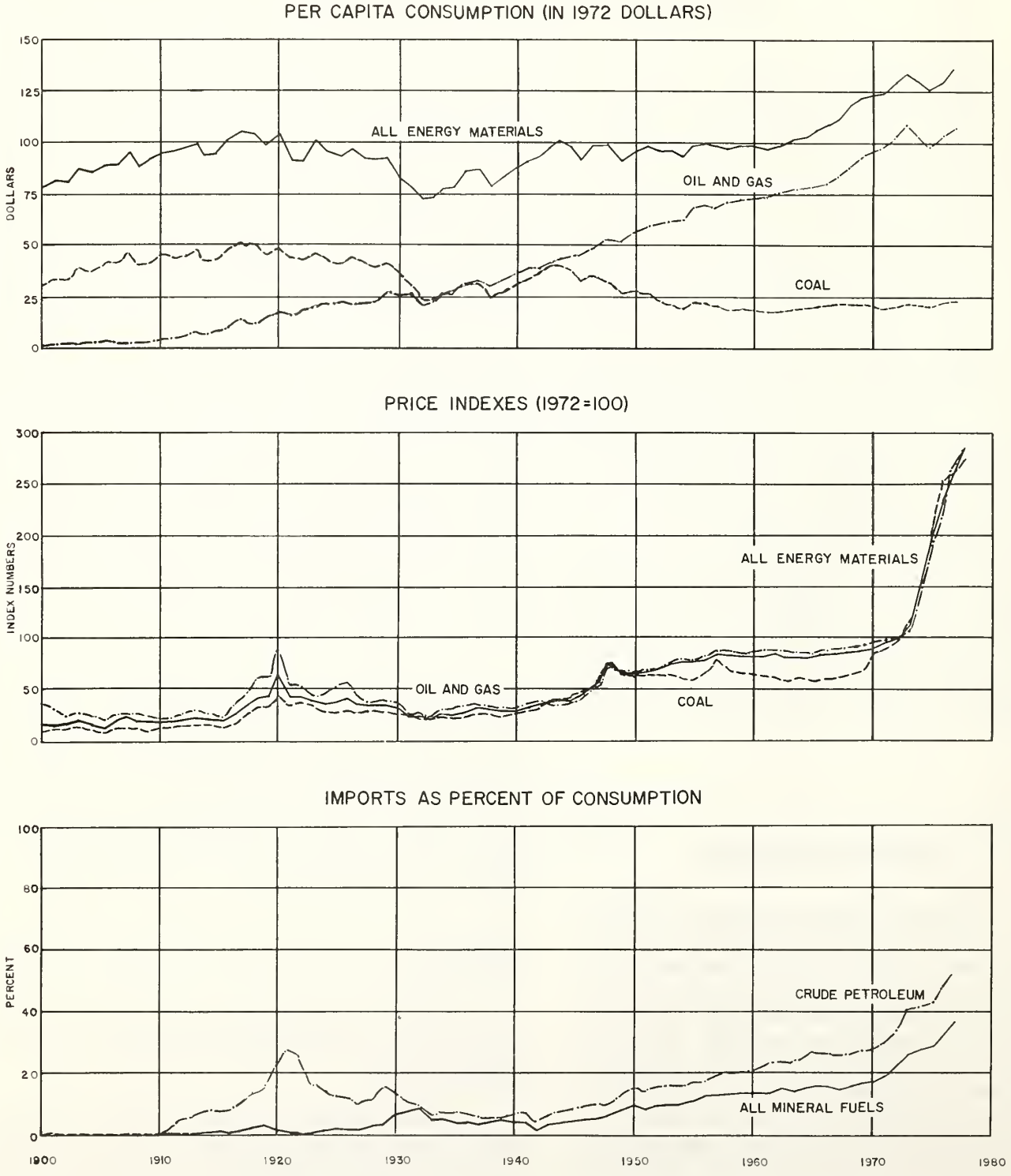


TABLE 16. Per Capita Consumption of Energy Materials in the United States, by Broad Source Classes: 1900 to 1977

(In constant 1972 dollars)

Year	Per capita consumption of energy materials							Year	Per capita consumption of energy materials						
	All energy materials	Direct energy	Coal	Oil and gas			Other sources		All energy materials	Direct energy	Coal	Oil and gas			Other sources
				All oil and gas	Crude petroleum only	Natural gas only						All oil and gas	Crude petroleum only	Natural gas only	
								1939.....	82.3	1.4	27.4	33.3	28.9	3.3	20.2
								1938.....	78.3	1.4	25.0	30.7	26.5	3.0	21.3
1977.....	136.0	3.8	23.5	106.0	82.8	18.4	2.7	1937.....	86.1	1.4	30.7	32.2	27.9	3.2	21.8
1976.....	133.7	5.0	22.8	103.5	79.2	19.2	2.4	1936.....	85.1	1.2	30.9	30.2	26.2	3.0	22.8
1975.....	125.5	5.3	20.6	97.5	73.5	18.9	2.2	1935.....	79.1	1.2	27.1	27.5	23.9	2.7	23.3
1974.....	130.3	5.3	21.0	101.8	75.8	20.8	2.1	1934.....	76.9	1.1	26.7	25.7	22.4	2.4	23.4
1973.....	134.8	4.9	21.1	106.7	79.4	21.7	2.1	1933.....	74.3	1.1	24.9	24.4	21.3	2.3	23.9
1972.....	130.2	4.9	19.8	103.5	75.6	22.1	2.1	1932.....	72.3	1.1	24.2	23.3	20.2	2.3	23.7
1971.....	124.4	4.8	19.4	98.0	70.8	21.8	2.1	1931.....	78.6	1.0	29.1	25.6	22.1	2.4	23.0
1970.....	122.2	4.5	20.4	95.1	68.4	21.4	2.2	1930.....	84.3	1.1	35.5	25.1	21.2	2.6	22.6
1969.....	121.1	4.6	20.5	93.7	67.6	20.6	2.4	1929.....	92.1	1.2	40.5	27.0	23.1	2.7	23.5
1968.....	116.5	4.2	20.4	89.5	65.0	19.3	2.4	1928.....	90.7	1.2	39.9	24.7	21.3	2.3	24.9
1967.....	111.2	4.2	19.8	84.7	61.5	18.3	2.5	1927.....	91.2	1.1	40.5	23.2	20.1	2.2	26.5
1966.....	108.4	3.7	20.2	81.8	59.7	17.4	2.6	1926.....	95.6	1.0	43.7	22.9	20.1	2.0	28.0
1965.....	105.0	3.8	19.4	79.0	57.9	16.4	2.8	1925.....	93.5	0.9	40.6	22.1	19.7	1.8	29.9
1964.....	102.1	3.5	18.8	76.9	56.3	16.1	2.9	1924.....	95.5	0.8	41.8	20.8	18.6	1.6	32.1
1963.....	100.9	3.3	18.1	76.4	56.7	15.4	3.1	1923.....	100.8	0.8	45.8	20.6	18.5	1.5	33.6
1962.....	99.1	3.4	17.3	75.2	56.3	14.8	3.2	1922.....	90.7	0.8	36.8	17.1	15.5	1.3	36.0
1961.....	96.6	3.1	17.0	73.0	55.0	14.0	3.5	1921.....	91.2	0.7	37.5	15.3	13.9	1.1	37.7
1960.....	97.6	3.1	17.8	72.8	55.5	13.6	4.0	1920.....	103.6	0.7	47.3	15.6	13.9	1.4	40.0
1959.....	97.6	2.9	17.9	72.4	55.6	13.0	4.5	1919.....	99.2	0.6	45.1	12.6	11.1	1.3	40.8
1958.....	96.2	3.0	17.7	70.6	54.8	12.1	4.9	1918.....	103.8	0.6	50.6	10.9	9.3	1.3	41.7
1957.....	97.9	2.9	20.3	69.4	54.0	11.7	5.3	1917.....	104.9	0.5	51.1	11.5	9.8	1.5	41.9
1956.....	99.7	2.7	21.3	69.8	54.9	11.2	5.8	1916.....	100.8	0.5	48.2	9.7	8.2	1.4	42.5
1955.....	98.4	2.6	21.4	68.2	53.7	10.7	6.2	1915.....	94.7	0.4	42.2	8.7	7.4	1.2	43.4
1954.....	93.2	2.5	19.9	63.9	50.4	10.0	6.8	1914.....	93.8	0.4	42.6	7.7	6.5	1.2	43.0
1953.....	96.2	2.5	22.7	63.5	50.4	9.7	7.6	1913.....	99.6	0.4	47.8	7.9	6.7	1.2	43.6
1952.....	96.2	2.6	23.6	61.6	49.1	9.3	8.4	1912.....	97.3	0.3	46.0	7.6	6.4	1.2	43.3
1951.....	99.0	2.5	26.9	60.1	48.4	8.7	9.5	1911.....	95.1	0.3	43.8	6.8	5.7	1.0	44.2
1950.....	95.5	2.5	27.0	56.2	45.9	7.4	9.9	1910.....	95.0	0.3	45.2	6.3	5.3	1.1	43.2
1949.....	91.0	2.3	26.0	51.1	42.3	6.4	11.5	1909.....	92.2	0.3	42.4	5.1	4.1	1.0	44.4
1948.....	98.4	2.2	32.7	51.5	43.1	6.1	12.0	1908.....	89.5	0.2	39.5	5.0	4.2	0.9	44.7
1947.....	98.3	2.1	34.3	49.1	41.4	5.5	12.8	1907.....	95.7	0.2	46.2	4.8	3.9	0.9	44.5
1946.....	93.3	2.2	31.8	45.7	38.0	5.1	13.7	1906.....	89.8	0.2	40.6	4.5	3.6	0.9	44.6
1945.....	98.3	2.2	36.0	45.3	38.4	5.0	14.7	1905.....	89.7	0.2	39.8	4.9	4.0	0.8	44.9
1944.....	100.2	2.1	38.8	43.3	36.5	5.0	16.1	1904.....	85.8	0.2	36.5	4.0	3.2	0.7	45.2
1943.....	97.4	2.1	39.2	39.9	33.6	4.6	16.1	1903.....	87.4	0.2	38.1	3.7	3.0	0.7	45.4
1942.....	92.9	1.9	36.4	37.8	32.2	4.0	16.9	1902.....	80.7	0.2	31.8	3.2	2.5	0.7	45.6
1941.....	91.9	1.5	33.1	38.9	33.6	3.7	18.4	1901.....	80.8	0.2	32.5	2.3	1.6	0.7	45.8
1940.....	87.1	1.5	30.6	35.7	30.9	3.5	19.4	1900.....	78.2	0.1	30.2	1.9	1.2	0.6	46.0

Source: Based on tables 2, A5, and worksheets for table A5.

Table 17. Percent Distribution of Energy Materials Consumed in the United States Measured in Constant 1972 Dollars, by Source: 5-Year Averages, 1900 to 1974, and Average 1975 to 1977

Period	All energy materials (million dollars)	Percent of all energy materials					
		Direct energy	Coal	Oil and gas	Uraninum	Fuelwood	Feed for horses
1975-1979	28,351	3.6	16.9	77.7	0.5	0.8	0.5
1970-1974	26,793	3.8	15.8	78.7	0.3	0.7	0.6
1965-1969	22,345	3.6	17.8	76.3	0.1	1.3	0.9
1960-1964	18,506	3.3	17.9	75.4	0.0	2.1	1.3
1955-1959	16,838	2.9	20.1	71.6	0.0	3.1	2.3
1950-1954	15,130	2.6	25.0	63.7	-	4.5	4.2
1945-1949	13,880	2.3	33.5	50.7	-	5.9	7.5
1940-1944	12,744	2.0	37.9	41.7	-	7.4	11.1
1935-1939	10,654	1.6	34.3	37.5	-	10.8	15.8
1930-1934	9,684	1.4	36.3	32.1	-	12.4	17.8
1925-1929	11,048	1.1	44.3	25.9	-	8.6	20.0
1920-1924	10,648	0.8	43.4	18.6	-	10.2	27.0
1915-1919	10,416	0.5	47.1	10.6	-	11.2	30.6
1910-1914	9,218	0.4	46.9	7.6	-	12.7	32.5
1905-1909	7,986	0.3	45.6	5.3	-	14.9	33.9
1900-1904	6,559	0.2	41.0	3.7	-	19.7	35.4

Source: Based on table A5.

- Represents zero.

Table 18. Percent Distribution of Energy Materials Consumed in the United States Measured in British Thermal Units, by Source: 5-Year Averages, 1900 to 1974, and Average 1975 to 1977

Period	All energy materials (trillion Btu)	Percent of all energy materials					
		Direct energy	Coal	Oil and gas	Uranium	Fuelwood	Feed for horses
1975-1977	69,895	1.3	22.4	74.7	1.0	0.5	0.1
1970-1974	67,483	1.4	20.5	77.2	0.3	0.5	0.1
1965-1969	56,485	1.3	23.0	74.8	0.1	0.7	0.1
1960-1964	45,736	1.2	23.7	73.8	0.0	1.2	0.1
1955-1959	40,227	1.1	27.5	69.3	0.0	1.9	0.2
1950-1954	35,432	1.0	34.8	61.0	-	2.7	0.4
1945-1949	31,822	0.9	47.7	47.2	-	3.4	0.8
1940-1944	28,713	0.8	54.9	38.8	-	4.3	1.2
1935-1939	22,180	0.7	53.8	37.3	-	6.4	1.8
1930-1934	19,867	0.6	57.8	32.3	-	7.2	2.1
1925-1929	23,739	0.5	67.3	24.7	-	5.3	2.2
1920-1924	21,208	0.4	71.1	18.8	-	6.6	3.2
1915-1919	20,726	0.2	77.3	11.6	-	7.2	3.7
1910-1914	17,984	0.2	78.4	8.8	-	8.7	4.0
1905-1909	15,145	0.1	78.5	6.6	-	10.5	4.3
1900-1904	11,616	0.1	75.5	5.2	-	14.4	4.8

Source: Based on table A12.

- Represents zero.

Per Capita Energy Consumption Measured in Constant 1972 Dollars and in British Thermal Units

Period	Average per capita consumption in -			
	Constant dollars		Btu	
	Dollars	Percent increase[1]	Thousand Btu	Percent increase[1]
1975-1977	131.8	2.7	324.8	0.4
1970-1974	128.3	14.0	323.5	13.7
1965-1969	112.5	13.4	284.4	15.9
1960-1964	99.2	1.3	245.4	4.9
1955-1959	97.9	2.0	234.0	4.1
1950-1954	96.0	0.1	224.8	1.0
1945-1949	95.9	1.9	219.7	3.7
1940-1944	94.1	14.3	211.8	23.8
1935-1939	82.3	6.6	171.1	7.9
1930-1934	77.2	-16.5	158.5	-20.4
1925-1929	92.5	-4.0	199.0	3.7
1920-1924	96.4	-4.0	191.9	-4.2
1915-1919	100.4	4.1	200.4	6.8
1910-1914	96.4	5.4	187.6	8.2
1905-1909	91.5	10.8	173.4	18.4
1900-1904	82.6	(NA)	146.4	(NA)

(NA) Not available.

[1]Represents the percent increase from the preceding period.

unit costs are indicated for energy materials, at the first point of market, per thousand Btu.

All kinds of energy	$0.398
Direct energy	1.082
Coal	0.306
Crude petroleum	0.579
Natural gas	0.192
Natural gas liquids	0.548
Uranium	0.556
Fuelwood	0.650
Feed for horses	4.139

It must not be concluded that these wide variations in apparent cost per Btu provide a measure of how much one fuel is cheaper than another. In large part they indicate how ready the fuel is for immediate consumption, and for what purpose and how efficiently the consumer can make use of the product. Thus the high unit cost attached to direct energy reflects that most of this is hydroelectric energy which is ready for much more efficient and immediate consumption than a lump of coal. The very high unit cost for feed for horses will supply immediate motive power. Transportation costs will double the cost of coal before it reaches the average consumer. Crude petroleum has little use until it passes through a refinery. The uranium figure is for the value of metal released for fuel purposes in 1972 as compared with nuclear generated energy in that year. A corresponding unit cost for uranium used as fuel, computed as an average for the last 10 years, is $0.295. But this includes a fuel supply for a much longer period. Moreover, very large capital expenditures are required to make use of uranium for fuel purposes. By the same token that the 1972 dollar value provides uneven weighting, the Btu weights are uneven in that they merely tell the

Comparison of Gross National Product and Energy Materials Consumption

Year	Gross national product (GNP) (Billion 1972 dollars)	Energy materials (EM)		Ratio of GNP to EM	
		Billion 1972 dollars (D)	Megabillion British thermal units (B)	GNP/D	GNP/B
1977	1,337	29.5	72.3	45.3	18.5
1969	1,088	24.6	62.3	44.2	17.5
1959	713	17.4	41.9	41.0	17.0
1949	486	13.6	30.9	35.7	15.7
1939	314	10.8	22.8	29.1	13.8
1929	305	11.3	24.8	27.0	12.3
1919	219	10.5	20.6	20.9	10.6
1909	175	8.4	16.0	20.8	10.9
1900	115	6.0	10.2	19.2	11.3

intrinsic energy value under laboratory conditions, not the amount of energy that the average consumer can realize from material supplied in the particular form in which it is first marketed.

A comparison of GNP with the two measures of energy input is shown in the table above. Using these approximately decade years, both of the series show an increase in GNP per unit of energy input for each suceeding period after 1919. With energy measured in terms of 1972 dollars the increase in GNP per unit of energy input between 1900 and 1977 is 136 percent. With energy input in terms of Btu the corresponding increase is 64 percent.

An approximate measure of energy use by major sectors and sources is shown in Table 19 for 1977. For both units of measure, 36 percent of all energy is shown as used for residential and commercial purposes, this use accounting for about 45 percent of the coal use and for 33 percent of the use of oil and gas. Another 36-38 percent of the use is for industrial purposes, accounting for 55 percent of the coal use and for 32 percent of the oil and gas use. Transportation requires 26-28 percent of our total energy use and about 35 percent of the use of oil and gas.

TABLE 19. Energy Use by Major Sectors and Sources: 1977

Sector	All energy	Coal	Oil and gas	Other energy sources
	In millions of 1972 dollars			
All sectors	29,489	5,093	22,972	1,424
Residental and commercial	10,530	2,276	7,619	635
Industrial	10,752	2,781	7,331	640
Transportation	8,207	36	8,022	149
	In trillion Btu			
All sectors	72,288	16,620	53,629	2,039
Residental and commercial	25,827	7,428	17,788	611
Industrial	27,576	9,076	17,114	1,386
Transportation	18,885	116	18,727	42

Source: Based primarily on U.S. Energy Information Administration figures.

PRICES OF ENERGY MATERIALS

Prices of energy materials increased by 184 percent between 1972 and 1977, much more than for any other use group. The price increase for natural gas was the greatest of all (319 percent) and that for uranium next (217 percent). Coal increased in price by 175 percent in the same period, and crude petroleum by 151 percent (see Table 20).

For long periods the price of oil and gas had remained fairly stable, often increasing less than all energy materials and less than all wholesale prices. This was true of the period 1954 to 1972. Prices of coal had fallen somewhat during much of the period, but rose after 1965 (see Chart 10). These price series, which are based on the first sale of domestic products, do not reflect the rapid increase in prices of imported petroleum in recent years. It is these rapid increases, of course, that have triggered the rapid increase in domestic fuel prices.

FOREIGN TRADE IN ENERGY MATERIALS

We have already seen that exports of energy materials have always been small relative to production (see Table 9), but that the ratios of exports to production increased for coal after the second world war to a peak of 13 percent in 1955-1959. For oil and gas this ratio has been only 2 percent since 1960. At the beginning of the century, however, when oil and gas production was very small, we exported in the first five years nearly one-fourth of that production.

Imports of coal have amounted to less than one percent of domestic consumption throughout the 20th century. The most interesting import to consumption ratios for energy materials are shown in the lower section of Chart 10. Such ratios for all mineral fuels begin a fairly steady rise after 1940, to 8 in 1950, 13 in 1960, 17 in 1970, and at an accelerated rate to 36 in 1977. For crude petroleum only, the ratios are always higher with the two curves spreading increasingly apart. In the 1910's and 1920's an increase in crude petroleum imports is shown, amounting at the peak in 1921 to 27 percent of consumption. In the increase for crude petroleum after 1942, imports as a percent of consumption amounted to 14 percent in 1950, to 21 in 1960, to 27 in 1970, and to 54 in 1977.

TABLE 20. Price Indexes for Energy Materials by Source Classes in the United States: 5-Year Periods and Selected Years: 1900 to 1977

(1972=100)

Year or period	Energy materials by source classes[1]								
	All energy materials	Mineral fuels					Fuelwood	Feed for horses	Uranium for fuel
		All mineral fuels	Coal	All oil and gas	Crude petroleum only	Natural gas only			
1977	284	285	275	288	251	419	191	175	317
1976	254	255	255	256	241	312	172	210	256
1975	231	232	252	227	226	239	152	222	195
1970-1974	120	120	118	120	122	114	107	139	106
1970	91	91	82	93	94	92	78	99	96
1965-1969	82	82	61	87	87	86	74	94	119
1960-1964	80	80	59	85	85	81	66	87	(NA)
1955-1959	79	79	63	81	89	62	69	94	(NA)
1950-1954	70	70	64	71	77	44	66	119	(NA)
1950	67	66	64	66	74	35	63	108	(NA)
1945-1949	54	54	54	53	57	31	47	118	(NA)
1940-1944	33	33	32	34	34	26	26	69	(NA)
1935-1939	28	29	25	32	32	28	18	53	(NA)
1930-1934	24	25	22	28	26	36	15	42	(NA)
1929	32	33	26	40	37	44	19	66	(NA)
1925-1929	35	36	27	45	43	48	19	66	(NA)
1920-1924	45	47	36	57	54	54	23	70	(NA)
1920	62	65	44	92	91	51	35	113	(NA)
1915-1919	32	34	24	45	43	38	16	90	(NA)
1910-1914	19	19	15	24	22	31	11	56	(NA)
1905-1909	18	19	14	22	21	27	10	53	(NA)
1900-1904	18	19	14	30	28	32	8	45	(NA)

(NA) Not available.

[1]For sources see appendix B. The figures are from table B1 and the worksheets for that table.

Chapter 7.—Physical-Structure Materials

In the 1920's, 1940's, 1950's, and 1960's, physical-structure materials averaged 25 to 26 percent of all raw materials. In periods of depression this group decreases more than either of the other use classifications. This is reflected in the drop to 21.8 percent of all raw materials in 1975, the much greater drop to 17.4 percent of all raw materials in 1932, and the drop to 22.2 percent of all raw materials in 1921. During the first two decades of the century physical-structure materials represented a somewhat larger portion of raw materials use, averaging about 28 percent in the 1910's and 29 percent in the 1900's.

PER CAPITAL PHYSICAL-STRUCTURE MATERIAL CONSUMPTION

Per capita consumption of these materials averaged $105 in 1970-1977 and $106 in each of the three preceeding decades. The peak per capita ratio for these periods occurred in 1941 at $118. This same ratio occurred again for 1910 and 1905. It was exceeded in 3 years only: 1906, 1907, and 1909. The peak for the century was attained in 1906 at $125 (see Chart 11 and Table 21).

DURABLE AND NONDURABLE PHYSICAL-STRUCTURE MATERIALS

In order to better understand the behavior of physical-structure materials, they have been divided into two classes on the basis of the primary use of each of the component series. Durable goods includes the series for wood and mineral construction materials, metals, certain other nonmetallic minerals, and horses and mules. Nondurable goods include agriculture and fishery nonfoods (such as cotton, wool, and tobacco), wildlife products, pulpwood, mineral fuels used for nonfuel purposes, and chemical and fertilizer minerals. These two broad classes of materials on a per capita basis are shown separately in the upper section of Chart 11 and in Table 21. Table 22 shows the aggregate value of these two classes and details for the major groups of products covered.

For nondurable goods, an upward trend seems to be indicated during the first five decades. The peak value for this series is $51 per capita in 1941, and the lowest value is $21 in 1921. But the average per capita consumption of nondurable goods materials was about $27 for the 1900's, $32 for the 1910's, $34 for the 1920's, $35 for the 1930's, and $47 for the 1940's. A slight decline is indicated for the 2 succeding decades, and for 1970-1977, showing successively $44, $43, and $41. The high figure for the 1940's probably reflects some wasteful use of these materials in the war and early postwar period. It is somewhat surprising to see how little this nondurable goods series reflects depression periods.

The durable goods series, by contrast, very strikingly reflects depressions. It is highest in the first decade, with a peak of $94.5 in 1906. Of this total $59.9 represented sawlogs and other wood construction materials, $7.4 represented mineral construction materials, $13.6 represented metals, $13.1 represented horses and mules, and $0.6 represented other nonmetallic minerals. Wood construction materials dominate the durable goods series during the first 3 decades, amounting to 64 percent in the 1900's, to 60 percent in the 1910's, and 59 percent in the 1920's. This may be compared with the magnitude of wood construction materials in the last 3 decades: 42 percent of all durable goods in the 1950's, 37 percent in the 1960's, and 35 percent in the 1970's. It is interesting to compare the composition of the durable goods materials per capita consumption figure of $65.1 for 1977 with the one given above for 1906. It includes $23.5 for wood construction materials, $14.9 for mineral construction materials, $10.4 for iron and ferroalloy metals, $13.8 for other metals, $0.1 for horses and mules, and $2.4 for other nonmetallic minerals.

Table 23 provides a comparison of the percent increase in consumption of raw materials and in production of manufactured products for approximately decade periods. Figures are shown for all raw materials and all manufacturing industries and also for materials used primarily for durable goods, compared with durable good production and for materials primarily used for nondurable goods compared with the production of such products. Almost all segments of this table indicate a much greater product increase than the increase in materials input.

CHART 11.-PHYSICAL-STRUCTURE MATERIALS CONSUMPTION, PRICES, AND IMPORTS IN THE UNITED STATES: 1900-1977

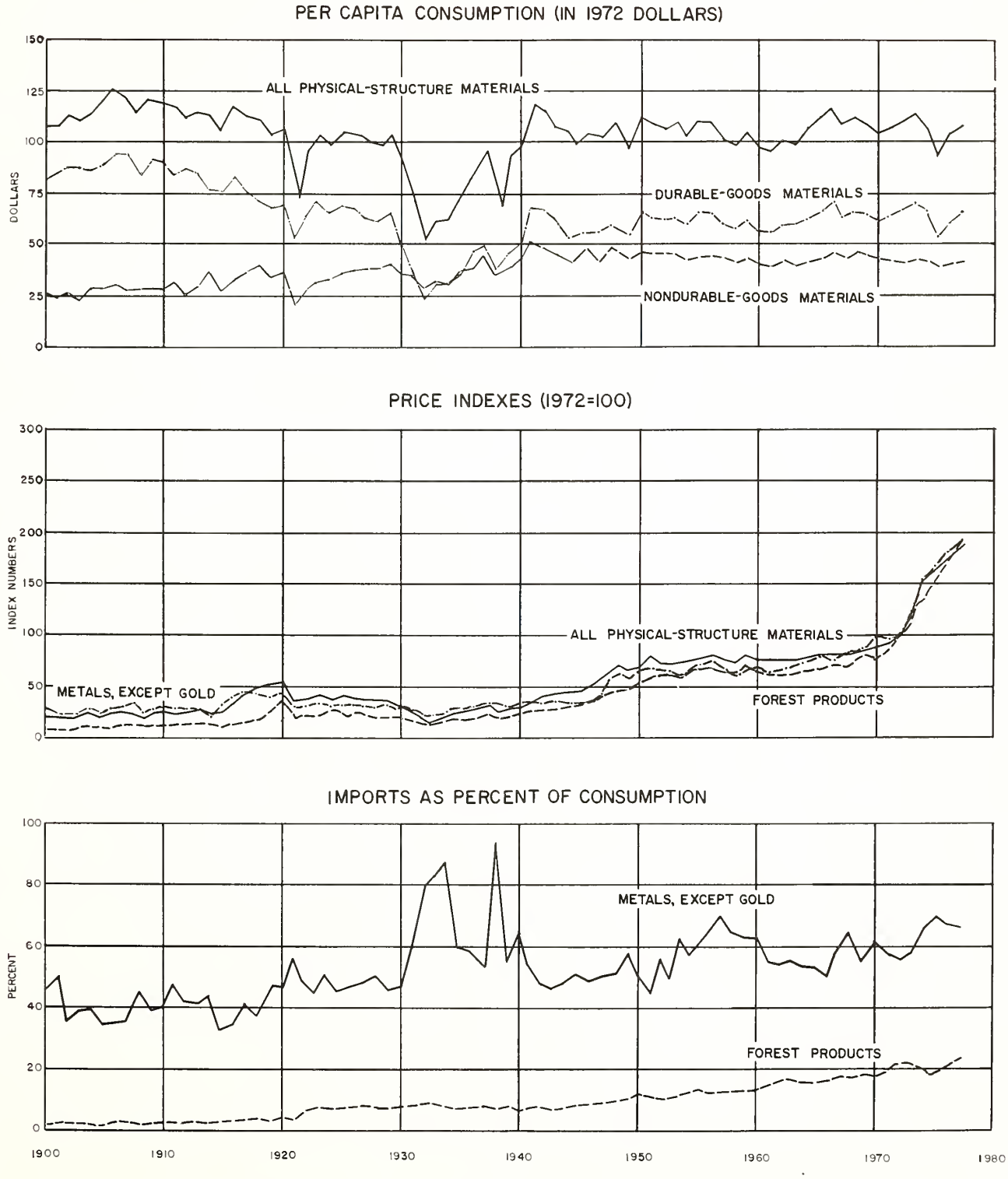


TABLE 21. Per Capita Consumption of Physical-Structure Materials in the United States, by Broad Source Classes: 1900 to 1977

(In constant 1972 dollars)

Year	Per capita consumption for physical-structure materials							Year	Per capita consumption for physical-structure materials						
	All physical-structure materials	Materials primarily for durable goods					Materials primarily for non-durable goods		All physical-structure materials	Materials primarily for durable goods					Materials primarily for non-durable goods
		All durable goods materials	Construction materials		Metals					All durable goods materials	Construction materials		Metals		
			Sawlogs and other wood	Mineral non-metals	Iron and ferroalloy metals	Other					Sawlogs and other wood	Mineral non-metals	Iron and ferroalloy metals	Other	
								1939.	86.1	46.3	25.5	6.6	4.5	7.0	39.7
								1938.	73.2	37.8	23.1	5.4	2.3	4.4	35.4
1977.	106.3	65.1	23.5	14.9	10.4	13.8	41.2	1937.	92.3	48.7	26.1	6.0	6.1	7.3	43.7
1976.	103.5	62.8	21.7	14.2	9.5	15.1	40.7	1936.	83.8	46.0	24.9	5.8	5.2	6.9	37.8
1975.	92.5	54.2	19.1	13.7	8.9	10.7	38.3	1935.	71.9	35.8	21.1	4.0	2.9	4.5	36.1
1974.	106.5	65.5	20.7	16.1	11.4	15.1	41.0	1934.	60.8	30.1	18.1	3.9	2.2	2.6	30.7
1973.	113.6	70.5	23.9	16.9	11.7	15.7	43.1	1933.	60.7	29.2	17.0	3.5	1.9	3.6	31.5
1972.	109.5	67.7	24.3	15.3	11.0	14.9	41.8	1932.	53.0	24.3	14.5	3.9	0.7	2.1	28.7
1971.	106.0	64.1	23.5	14.9	10.0	13.8	41.9	1931.	71.1	36.7	19.7	5.4	2.8	5.5	34.4
1970.	103.7	61.4	21.9	15.3	9.4	12.9	42.3	1930.	84.4	49.5	27.9	7.5	5.4	5.3	34.9
1969.	109.0	65.1	23.0	15.6	10.4	14.1	43.9	1929.	104.4	64.9	35.8	8.7	7.2	9.7	39.5
1968.	111.1	66.0	23.7	15.3	10.9	14.1	45.1	1928.	98.0	61.0	34.4	8.3	5.9	9.0	37.0
1967.	109.0	64.9	23.0	14.8	10.4	14.6	44.0	1927.	99.5	62.4	36.1	8.4	5.9	8.3	37.1
1966.	116.5	70.7	24.2	15.6	12.2	16.5	45.8	1926.	103.5	66.7	38.6	8.1	6.7	9.2	36.8
1965.	110.7	66.8	24.6	15.5	11.4	13.3	43.9	1925.	103.9	68.0	40.1	8.0	6.4	9.0	35.9
1964.	106.6	63.7	24.6	14.9	9.4	12.8	42.8	1924.	98.7	65.6	39.9	7.4	5.2	8.6	33.1
1963.	99.7	59.5	23.8	14.3	8.1	11.5	40.2	1923.	103.2	71.4	42.8	7.2	7.0	8.8	31.8
1962.	100.6	59.2	23.1	14.0	8.1	12.1	41.3	1922.	91.2	63.5	38.8	5.6	4.9	7.8	27.7
1961.	95.6	56.0	22.4	13.4	7.2	11.0	39.6	1921.	74.3	53.5	34.2	4.6	2.4	5.1	20.8
1960.	97.8	56.2	22.8	13.4	7.7	10.4	41.6	1920.	105.8	70.2	41.1	5.2	6.8	8.5	35.6
1959.	104.9	61.9	25.6	13.5	8.0	12.7	43.0	1919.	103.7	69.7	41.0	4.7	5.5	9.0	34.0
1958.	98.4	57.7	23.4	12.8	7.4	12.3	40.7	1918.	112.0	72.0	39.5	4.2	7.5	10.5	40.0
1957.	101.0	59.8	23.1	12.7	9.3	12.7	41.2	1917.	112.4	76.2	43.4	5.6	7.5	8.9	36.2
1956.	109.1	64.4	26.9	12.7	9.8	12.9	44.7	1916.	115.4	83.1	47.4	6.8	7.7	10.2	32.3
1955.	109.3	64.5	27.0	12.1	10.9	12.4	44.7	1915.	104.1	76.2	45.0	6.1	5.7	8.1	27.9
1954.	102.3	60.0	26.2	11.1	9.2	11.4	42.2	1914.	113.8	76.4	48.2	6.7	4.4	5.5	37.4
1953.	109.3	63.8	26.7	10.1	11.1	13.8	45.5	1913.	114.0	84.5	51.8	7.1	6.6	6.8	29.5
1952.	107.7	62.5	27.3	10.1	8.8	14.0	45.2	1912.	112.6	87.1	54.1	7.1	6.2	7.1	25.4
1951.	108.8	62.6	27.7	9.9	10.5	12.1	46.2	1911.	115.9	85.1	52.9	7.6	4.6	7.0	30.8
1950.	112.4	65.2	29.3	9.2	10.1	14.2	47.2	1910.	118.0	90.4	55.9	7.6	6.6	6.8	27.5
1949.	97.0	54.5	25.1	8.1	7.9	11.3	42.5	1909.	119.6	91.9	57.2	7.7	6.2	6.7	27.7
1948.	109.6	59.9	29.1	8.6	8.5	11.2	49.7	1908.	113.0	85.4	55.4	6.8	4.1	5.4	27.6
1947.	103.0	56.9	27.9	7.9	7.2	11.5	46.1	1907.	121.6	94.2	60.9	7.3	6.6	5.7	27.4
1946.	104.2	55.1	27.6	7.0	6.5	11.4	49.1	1906.	125.3	94.5	59.9	7.4	6.5	7.1	30.8
1945.	99.6	54.0	23.9	5.5	8.4	13.4	45.6	1905.	117.9	89.8	57.3	7.3	5.7	6.0	28.1
1944.	106.2	58.2	27.4	5.5	9.9	12.6	48.1	1904.	114.1	86.0	57.0	6.7	3.8	5.3	28.1
1943.	108.3	62.3	28.6	6.4	10.2	14.0	46.0	1903.	110.8	87.2	56.3	6.8	5.3	5.6	23.6
1942.	115.6	67.3	31.5	7.9	9.9	15.0	48.3	1902.	112.8	87.7	55.7	7.2	5.9	5.9	25.1
1941.	118.3	67.6	31.5	7.9	9.7	15.5	50.7	1901.	108.3	84.0	54.3	6.2	5.8	4.8	24.3
1940.	94.6	51.8	27.3	6.7	6.6	8.4	42.7	1900.	107.9	81.9	53.5	6.4	4.7	4.8	26.0

Source: Based on tables 2 and 22.

TABLE 22. Consumption of Physical-Structure Materials in the United States, by Source Classes: 1900 to 1977

(Millions of constant 1972 dollars)

Year	All physical-structure materials	Materials primarily for durable goods						Materials primarily for nondurable goods				
		Total	Sawlogs and other construction wood	Iron and ferralloy metals	Other metals	Mineral construction materials	Other nonmetallic minerals and horses and mules	Total	Agriculture and fishery nonfoods and wildlife products	Pulpwood	Mineral fuels for nonfuel purposes	Chemical and fertilizer minerals
1977.....	23,046	14,107	5,086	2,250	2,997	3,236	538	8,939	4,210	1,093	2,091	1,545
1976.....	22,273	13,509	4,663	2,052	3,249	3,049	496	8,764	4,300	1,124	1,913	1,427
1975.....	19,758	11,584	4,076	1,892	2,280	2,916	420	8,174	4,089	1,009	1,743	1,333
1974.....	22,567	13,870	4,377	2,409	3,169	3,417	471	8,697	4,004	1,266	1,990	1,437
1973.....	23,904	14,826	5,037	2,453	3,297	3,547	492	9,078	4,447	1,197	2,067	1,367
1972.....	22,861	14,140	5,071	2,297	3,107	3,205	460	8,721	4,398	1,120	1,918	1,285
1971.....	21,953	13,274	4,860	2,072	2,849	3,087	406	8,679	4,568	1,128	1,759	1,224
1970.....	21,246	12,575	4,488	1,934	2,644	3,130	379	8,671	4,569	1,164	1,707	1,231
1969.....	22,090	13,192	4,665	2,101	2,852	3,157	417	8,898	4,863	1,154	1,608	1,273
1968.....	22,297	13,245	4,753	2,190	2,830	3,066	406	9,052	5,263	1,092	1,513	1,184
1967.....	21,649	12,904	4,574	2,061	2,910	2,949	410	8,745	5,129	1,052	1,401	1,163
1966.....	22,902	13,905	4,750	2,405	3,252	3,070	428	8,997	5,368	1,076	1,432	1,121
1965.....	21,501	12,974	4,780	2,210	2,576	3,016	392	8,527	5,159	1,030	1,324	1,014
1964.....	20,452	12,231	4,717	1,808	2,451	2,864	391	8,221	5,124	951	1,259	887
1963.....	18,872	11,258	4,505	1,541	2,170	2,701	341	7,614	4,814	899	1,088	813
1962.....	18,759	11,048	4,299	1,518	2,259	2,617	355	7,711	5,091	882	961	777
1961.....	17,559	10,287	4,115	1,329	2,012	2,465	366	7,272	4,846	843	893	690
1960.....	17,671	10,162	4,124	1,387	1,880	2,419	352	7,509	5,077	870	870	692
1959.....	18,657	11,004	4,548	1,429	2,255	2,408	364	7,653	5,324	829	799	701
1958.....	17,213	10,090	4,088	1,292	2,146	2,241	323	7,123	5,036	767	709	611
1957.....	17,369	10,286	3,976	1,601	2,190	2,184	335	7,083	4,890	828	703	662
1956.....	18,424	10,874	4,540	1,653	2,174	2,145	362	7,550	5,293	890	717	650
1955.....	18,126	10,702	4,473	1,804	2,053	2,015	357	7,424	5,340	795	677	612
1954.....	16,668	9,784	4,272	1,498	1,860	1,814	340	6,884	5,006	727	589	562
1953.....	17,511	10,224	4,284	1,782	2,208	1,613	337	7,287	5,390	735	599	563
1952.....	16,975	9,848	4,309	1,394	2,213	1,588	344	7,127	5,326	707	581	513
1951.....	16,857	9,694	4,285	1,632	1,873	1,534	370	7,163	5,343	732	586	502
1950.....	17,125	9,929	4,457	1,531	2,168	1,396	377	7,196	5,597	633	519	447
1949.....	14,526	8,166	3,760	1,182	1,692	1,211	321	6,360	4,961	555	455	389
1948.....	16,129	8,810	4,277	1,253	1,648	1,259	373	7,319	5,803	631	481	404
1947.....	14,897	8,231	4,041	1,042	1,666	1,139	343	6,666	5,708	586	462	410
1946.....	14,781	7,814	3,915	925	1,612	994	368	6,967	5,643	530	432	362
1945.....	13,993	7,584	3,355	1,184	1,882	775	388	6,409	5,196	461	397	355
1944.....	14,757	8,081	3,809	1,381	1,748	761	382	6,676	5,505	436	367	368
1943.....	14,859	8,547	3,928	1,396	1,914	878	431	6,312	5,207	411	339	355
1942.....	15,657	9,116	4,265	1,344	2,029	1,068	410	6,541	5,425	450	344	322
1941.....	15,845	9,054	4,222	1,293	2,077	1,062	400	6,791	5,725	434	352	280
1940.....	12,539	6,874	3,621	880	1,119	882	372	5,665	4,780	370	290	225
1939.....	11,317	6,090	3,356	589	924	863	358	5,227	4,404	357	271	195
1938.....	9,547	4,932	3,009	294	569	704	356	4,615	3,907	303	239	166
1937.....	11,958	6,302	3,385	792	942	778	405	5,656	4,815	375	253	213
1936.....	10,789	5,920	3,207	667	885	742	419	4,869	4,124	330	236	179
1935.....	9,199	4,577	2,701	377	571	508	420	4,622	3,992	284	192	154
1934.....	7,722	3,827	2,299	285	336	499	408	3,895	3,319	257	182	137
1933.....	7,665	3,684	2,141	245	457	441	400	3,981	3,439	253	160	129
1932.....	6,645	3,045	1,821	83	266	484	391	3,600	3,140	215	159	86
1931.....	8,861	4,574	2,456	353	684	675	406	4,287	3,711	249	185	142
1930.....	10,438	6,123	3,454	662	661	922	424	4,315	3,654	272	223	166
1929.....	12,762	7,933	4,371	883	1,180	1,068	431	4,829	4,134	287	236	172
1928.....	11,845	7,374	4,161	719	1,083	1,000	411	4,471	3,828	266	220	157
1927.....	11,885	7,456	4,313	710	989	1,001	443	4,429	3,825	250	211	143
1926.....	12,197	7,858	4,542	790	1,087	949	490	4,339	3,748	249	200	142
1925.....	12,067	7,894	4,653	746	1,044	928	523	4,173	3,636	222	188	127
1924.....	11,286	7,500	4,563	590	985	842	520	3,786	3,283	210	174	119
1923.....	11,590	8,017	4,808	787	989	812	621	3,573	3,072	205	161	135
1922.....	10,064	7,011	4,289	538	859	619	706	3,053	2,622	186	128	117
1921.....	8,082	5,823	3,724	256	557	502	784	2,259	1,947	136	91	85
1920.....	11,296	7,494	4,390	724	908	559	913	3,802	3,390	167	112	133
1919.....	10,928	7,349	4,320	581	952	491	1,005	3,579	3,232	137	96	114
1918.....	11,744	7,551	4,139	787	1,104	436	1,085	4,193	3,846	136	82	129
1917.....	11,654	7,901	4,502	775	927	585	1,112	3,753	3,409	140	77	127
1916.....	11,807	8,503	4,854	785	1,043	694	1,127	3,304	2,986	137	73	108
1915.....	10,490	7,676	4,535	571	813	618	1,139	2,814	2,528	130	68	88
1914.....	11,313	7,592	4,793	437	543	662	1,157	3,721	3,451	120	64	86
1913.....	11,113	8,238	5,048	643	659	696	1,192	2,875	2,605	115	63	92
1912.....	10,760	8,331	5,175	595	677	678	1,206	2,429	2,170	111	59	89
1911.....	10,917	8,016	4,979	434	661	716	1,226	2,901	2,658	106	54	83
1910.....	10,934	8,382	5,183	608	629	707	1,255	2,552	2,320	100	54	78
1909.....	10,861	8,345	5,195	567	611	701	1,271	2,516	2,302	93	50	71
1908.....	10,056	7,597	4,930	363	478	606	1,220	2,459	2,277	75	43	64
1907.....	10,618	8,228	5,313	578	496	637	1,204	2,390	2,188	91	43	68
1906.....	10,742	8,102	5,131	554	605	636	1,176	2,640	2,452	79	40	69
1905.....	9,903	7,545	4,816	483	502	610	1,134	2,358	2,193	70	35	60
1904.....	9,404	7,089	4,693	316	436	551	1,093	2,315	2,163	68	30	54
1903.....	8,955	7,046	4,549	430	452	553	1,062	1,909	1,764	62	30	53
1902.....	8,953	6,960	4,420	467	470	575	1,028	1,993	1,852	57	29	55
1901.....	8,422	6,533	4,226	448	376	484	999	1,889	1,763	51	27	48
1900.....	8,236	6,252	4,081	361	367	485	958	1,984	1,863	46	26	49

Source: Based on table A5 and worksheets for that table.

TABLE 23. **Percent Increases in Consumption of Raw Materials and in Production of Manufactured Products: Approximately Decade Periods 1900 to 1977**

Period	Percent increase					
	Consumption of all raw materials	Production of all manufacturing industries	Durable manufacturers		Nondurable manufacturers	
			Consumption of raw materials primarily for such use	Production of such manufacturers	Consumption of raw materials primarily for such use	Production of such manufacturers
1900-1977	246	2,183	126	767	351	1,544
1967-1977	16	37	9	30	2	48
1958-1967	24	75	28	85	23	64
1947-1958	15	46	23	42	7	49
1939-1947	27	73	35	96	28	49
1929-1939	1	2	-23	-29	8	18
1919-1929	15	67	8	(NA)	35	36
1909-1919	10	41	-12	(NA)	42	31
1900-1909	29	55	33	(NA)	27	52

Source: Based on table 22 and FRB and Census indexes of production.

For metal ores the table below shows for Census years 1939-1977 a comparison of metal ores production and consumption with production indexes for the major metal products manufacturing industries. It is notable that in each case the manufacturing production indexes increase more rapidly than consumption of metals.

These metals consumption figures are for primary metals only. Table A10 shows, for major nonferrous metals, figures for the recovery of secondary metals from old scrap for the period 1910-1977. It indicates that whereas secondary metals represented an increasing proportion of the total for such primary and secondary metals for 4 decades, a smaller and smaller proportion of such metals are becoming available in the last 4 decades. The ratio of secondary metals to all such metals available was 24 percent in 1910, 45 percent in 1939, then down to 28 percent in 1977.

Comparison of Metal Ores Production and Consumption and Metal Products Production

Item	Index numbers (1939=100)							
	1977	1972	1967	1963	1958	1954	1947	1939
Metal ores:								
Production	165	186	149	150	128	120	123	100
Consumption	360	363	330	245	227	222	179	100
Manufacturing production:								
Fabricated metal products	527	450	402	312	256	240	200	100
Machinery, except electrical	950	760	655	437	323	310	263	100
Electrical machinery	1,813	1,558	1,277	857	523	472	286	100
Transportation equipment	777	693	642	509	362	382	204	100

Source: Based on appendix table A9 and FRB and Census indexes of manufacturing production.

Gross national product is compared with consumption of physical-structure materials in the tabulation below. The ratio of GNP to physical-structure materials is seen to increase for each successive period.

Comparison of Gross National Product and Physical-Structure Materials Consumption

Year	Billion 1972 dollars		GNP/PSM
	Gross national product (GNP)	Physical-structure materials (PSM)	
1977.....	1,337	23.0	58.1
1969.....	1,088	22.1	49.2
1959.....	713	18.7	38.1
1949.....	486	14.5	33.5
1939.....	314	11.3	27.8
1929.....	305	12.8	23.8
1919.....	219	10.9	20.1
1909.....	175	10.9	16.1
1900.....	115	8.2	14.0

PRICES OF PHYSICAL-STRUCTURE MATERIALS

The price index for physical-structure materials is summarized in Table 24. The table includes similar summaries of the component price series which make up the composite series. Although, the component price series for fishery products, wildlife products, and mineral fuels show price rises much greater, since 1972, than that for all physical-structure materials, they carry relatively little weight in this composite index. The more significant components are metal mining and forest products. These are shown in the center section of Chart 11. For most of the century forest products prices rose somewhat more rapidly than the prices of all physical-structures materials. But for considerable periods metal prices rose less rapidly than these other series.

FOREIGN TRADE IN PHYSICAL-STRUCTURE MATERIALS

The lower section of Chart 11 shows, for these same two significant components of physical-structure materials, the import to consumption ratios. In both cases significant increases in dependence on foreign sources of materials is indicated during the latter part of the period. For metals an increase is shown from about 40 percent dependence on imports at the beginning of the century to nearly 70 percent dependence on imports at the end of the period. For forest products the import-consumption ratio increased from less than 2 percent at the beginning of the century to about 20 percent in the last period.

TABLE 24. Price Indexes for Physical-Structure Materials by Source Classes in the United States: 5-Year Periods and Selected Years: 1900 to 1977

(1972 = 100)

Year or period	Physical-structure materials by source classes[1]									
	All physical-structure materials	Agricultural nonfoods		Fishery nonfoods	Wildlife products	Forest products	Minerals, except gold			
		Crops	Livestock				Metals, except gold	Mineral fuels	Construction minerals	Other nonmetallic minerals
1977.....	188	183	141	237	214	191	193	285	151	195
1976.....	177	180	134	190	183	172	181	255	144	199
1975.....	162	156	138	182	134	152	167	232	133	200
1970-1974....	111	115	111	150	108	107	113	120	101	110
1970.....	90	87	81	114	76	78	100	91	90	101
1965-1969....	84	86	82	95	[2]126	74	85	82	83	105
1960-1964....	79	90	80	77	(NA)	66	71	80	79	107
1955-1959....	79	89	75	87	(NA)	69	70	79	76	110
1950-1954....	75	94	96	73	(NA)	66	60	70	69	91
1950.....	70	92	96	66	(NA)	63	51	66	66	79
1945-1949....	58	82	78	63	(NA)	47	41	54	58	71
1940-1944....	38	52	52	33	(NA)	26	32	33	44	53
1935-1939....	28	35	34	(NA)	(NA)	18	28	29	39	46
1930-1934....	24	27	28	(NA)	(NA)	15	24	25	41	49
1929.....	37	48	58	(NA)	(NA)	19	33	33	48	75
1925-1929....	38	51	58	(NA)	(NA)	19	33	36	49	74
1920-1924....	42	57	55	(NA)	(NA)	23	33	47	52	81
1920.....	54	76	71	(NA)	(NA)	35	40	65	59	96
1915-1919....	40	63	66	(NA)	(NA)	16	40	34	35	79
1910-1914....	25	39	37	(NA)	(NA)	11	26	19	24	58
1905-1909....	24	34	32	(NA)	(NA)	10	27	19	23	57
1900-1904....	21	27	28	(NA)	(NA)	8	23	19	24	60

[1]For sources see Appendix B. The figures are from table B-1 or the worksheets for that table.
[2]1967-1969 only.

APPENDIX A.—The Measures of Raw Materials Production, Imports, Exports, and Consumption and Methods of Construction

Measures of production, apparent consumption, and net exports of raw materials in the United States were constructed for the period 1900-1950 by the President's Materials Policy Commission (PMPC). These series furnish the starting point for the measures of production, imports, exports. and consumption presented in this report (see tables A1 through A9). For. Bureau of the Census Working Paper Number 1, some revisions were made in the PMPC series, partly by including additional component series in order to increase coverage, and partly by substituting more reliable data for some of the figures previously used. Separate measures for gross imports and exports of raw materials were developed for the first time and all series were extended to cover 1951 and 1952. In both of these reports all series were presented in terms of average 1935-1939 dollars.

Bureau of the Census Working Paper Number 6 included annual figures through 1961. It used statistics from the 1954 and 1958 censuses of mineral industries and extensively revised statistics on supply and utilization of farm commodities prepared by the Agricultural Marketing Service. The basic production, imports, exports, and consumption series were presented both in terms of 1935-1939 and 1954 dollars, and statistics for detailed mineral commodity groups were published for the first time.

Bureau of the Census and Bureau of Mines Working Paper Number 30 made use of the 1963 Census of Mineral Industries figures and new and old series of other agencies in extending the earlier basic measures to cover the period 1962 through 1966. It introduced for the first time stock adjustments to the consumption figures for mineral products, extended coverage of agricultural products to include Hawaii and Alaska, and included a few additional commodities such as uranium ores. All production, imports, exports. and consumption series were in terms of 1954 dollars.

Bureau of the Census and Bureau of Mines Working Paper Number 35 made use of the 1967 Census of Mineral Industries and other new figures to convert all series to 1967 dollars. The series were extended to cover the years 1967, 1968, and 1969.

The present report makes use of revised and new series of the Economics, Statistics, and Cooperatives Service of the U.S. Department of Agriculture, 1972 Census of Mineral Industries figures, and new material on fishery and wildlife products to improve the coverage and to present all basic production, imports, exports, and consumption series in 1972 dollars. Annual figures are included for 1970-1977 and adjustments for comparability are made for earlier years. Figures for direct energy are shown for the first time. Direct energy includes hydroelectric, geothermal, wind, and solar energy. Separate figures are shown for nuclear energy. The use of horses and mules and feed for them are inlcuded for the first time.

The following paragraphs describe details of the methods and sources used, parts of which are reprinted from the previous reports.

GENERAL METHODS EMPLOYED

The aggregate measures of physical volume of raw materials are in terms of constant 1972 dollars. Development of these series by use of constant-dollar-value weights makes it possible to add together in a significant manner the output of such different raw materials as bales of cotton, barrels of oil, tons of ore, and cubic feet of gas.

These aggregate physical-volume measures were obtained by multiplying the physical quantity of each raw material for a given year by the average unit dollar value of the material for 1972, then adding together for the given year all of these dollar values. For materials produced domestically, the unit-value weights represent averages at point of production for all of the specified material which was produced in the United States in 1972. For materials which were not produced domestically in 1972, the weights usually represent comparable average unit values for materials imported during 1972.

The raw-materials consumption figures were constructed to approximate the raw-materials requirements for the end-use products consumed in the United States. This was done by including, insofar as feasible, in the import and export aggregates the raw-materials equivalents of semifabricated and fabricated products. For some series and some years, the raw materials "consumption" figures represent "apparent consumption" computed from production by adding imports and subtracting exports. But for agricultural materials beginning in 1924 and for the majority of mineral products, stock adjustments have been made to approximate actual consumption in the given year.

SCOPE OF THE SERIES

It has been estimated that the aggregate raw-materials measures cover over 95 percent of all production and consumption in the United States. Certain components of the series, however, are somewhat more comprehensive than others. Coverage is

discussed more fully in the following sections which describe the series for specific materials.

The basic production series represent primary production only, although available data for secondary production of nonferrous metals for the period 1910-1977 have been used to develop supplemental series. These series are shown in table A10.

The production series represent all 50 States. The import and export data relate to the trade of the United States. They exclude shipments to the U.S. Armed Forces for their own use, merchandise shipped in transit through the United States, and bunker fuel and other supplies and equipment for vessels and planes engaged in foreign trade. Included are Military Assistance Program—Grant-Aid shipments and Mutual Security Program economic assistance shipments.

SOURCES OF DATA USED

Insofar as feasible, primary sources were used for the data required in constructing these measures. The figures on agricultural production came primarily from the Economics, Statistics, and Cooperatives Service (ESCS) and the former Agricultural Marketing Service (AMS) and those on forest products from the Forest Service, U.S. Department of Agriculture. For later years, the basic figures on fishery products are from the National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration, U.S. Department of Commerce and for wildlife products primarily from the Fur Resources Committee. For earlier years, fish and wildlife production were from the Fish and Wildlife Service, U.S. Department of the Interior. The primary source of the mineral production series is the Bureau of Mines, U.S. Department of the Interior; the minerals unit-value weights are based primarily on Bureau of the Census data. The figures for imports and exports were compiled by the Bureau of the Census; however, for some of the raw-materials series secondary sources were used for the foreign-trade figures, representing statistics compiled from these census figures by the agency collecting the production data.

AGRICULTURAL MATERIALS

For the period 1924-1977, the series for production, imports, exports, and consumption are based primarily on the series for supply and utilization of farm commodities developed by the Agricultural Marketing Service and extended for 1962-1977 by the Economics, Statistics, and Cooperatives Service. (See Major Statistical Series of the U.S. Department of Agriculture, Volume 5, Consumption and Utilization of Agriculture Products, Agriculture Handbook No. 118, December 1957 and U.S. Department of Agriculture, Measuring the Supply and Utilization of Farm Commodities, Agriculture Handbook No. 91, November 1955.) These series include essentially all farm commodities produced domestically and imported "complementary and supplementary commodities." The latter represent those that do not compete directly with commodities produced in the United States, such as coffee, tea, cocoa, bananas, and some oilseeds. They exclude rubber and other gum products, silk, and vegetable fibers, such as sisal, hemp, and abaca, because they compete more directly with industrial products. They also exclude spices. For the series in this report, imports and consumption have been adjusted to include such foreign farm commodities.

The AMS series are in terms of 1947-1949 average farm prices for the period 1924-1954. For 1955-1960, average farm prices for 1957-1959 were used in the AMS and ESCS series. For 1961-1977, ESCS provided series weighted by average farm prices for 1971-1973. These prices represent receipts by farmers for their products sold at local markets or at the point to which they deliver their products in ther own conveyances or in local conveyances hired for the purpose. For commodities not produced domestically, import prices for the first domestic transaction were used. The detailed series for groups of commodities, such as "fresh vegetables" and "dairy products" were converted to 1972 constant dollars by means of price relatives for the respective series supplied by the Department of Agriculture.

The basic AMS and ESCS series are on a gross basis. For the series in this report, these were adjusted to a net basis by excluding from the production and consumption series seed and feed consumed domestically except feed for horses and mules. Both published and unpublished Department of Agriculture series were used in making these adjustments. Feed for horses and mules was estimated on the basis of acerage for such feeds from the Census of Agriculture.

The consumption series in this report include military takings but are adjusted, insofar as possible, to exclude from consumption and treat as exports quantities shipped for civilian use in foreign countries.

The AMS and ESCS consumption series are adjusted for changes in stocks, and the series in this report for agricultural materials are, therfore, presented as actual consumption rather than apparent consumption. However, no stock adjustments were made in the imported farm products series not represented in the AMS and ESCS series.

In accordance with the objectives of the series in this report, the AMS and ESCS imports and exports series include the raw materials equivalent of the major manufactured products produced from agricultural materials.

Checks which have been made within the Department of Agriculture indicate that the AMS and ESCS series represent over 95 percent coverage.

For years prior to 1924, the AMS commodity group series were extrapolated back to 1900 by use of production, imports, and exports measures for major components of such series or for closely related series. These series are less precise than the measures for 1924 and later years and no attempt was made to adjust the derived apparent consumption figures for this early period for changes in stocks.

Production Series

The AMS and ESCS agricultural production series used for 1924-1969 measures crop production at the point of harvest and lievstock products in terms of marketings for consumption. The basic production figures for these measures are compiled

by the Agricultural Marketing Service and the Economics, Statistics, and Cooperatives Service. These series represent "gross production of all farm commodities." They have been adjusted to a net basis by excluding feed and seed, except feed for horses and mules. These production series were also adjusted to exclude the farm value of imported cattle and hogs which is implicitly included in the AMS and ESCS series and to include the farm value of live cattle and hogs exported. (See table A7.)

The agricultural products represented at the farm level in the AMS and ESCS series are:

Crops:
- Food grains:
  - Rice
  - Rye
  - Wheat
- Feed crops:
  - Barley
  - Corn
  - Grain sorghums
  - Oats
- Sugar crops:
  - Maple sugar
  - Maple syrup
  - Sorgo syrup
  - Sugar beets
  - Sugarcane for sugar
  - Sugarcane syrup
- Fruits and tree nuts:
  - Almonds
  - Apples
  - Apricots
  - Avocados
  - Bananas
  - Blackberries
  - Cherries
  - Coffee
  - Cranberries
  - Figs, dried
  - Filberts
  - Grapefruit
  - Grapes
  - Lemons
  - Limes
  - Nectarines
  - Olives
  - Oranges
  - Papayas

Crops—Continued
- Fruits and tree nuts—Continued
  - Peaches
  - Pears
  - Pecans
  - Pineapples
  - Plums
  - Prunes, dried
  - Raspberries
  - Strawberries
  - Tangelos
  - Tangerines
  - Walnuts
- Potatoes, sweet potatoes, and dry beans and peas:
  - Beans, dry edible
  - Peas, dry field
  - Potatoes
  - Sweet potatoes
- Fresh vegetables:
  - Artichokes
  - Asparagus
  - Beets
  - Broccoli
  - Brussell sprouts
  - Cabbage
  - Cantaloupes
  - Carrots
  - Cauliflower
  - Celery
  - Cucumbers
  - Eggplant
  - Garlic
  - Kale
  - Lettuce and escarole
  - Lima beans
  - Onions and shallots
- Fresh vegetables—Continued
  - Peas, green
  - Peppers
  - Snap beans
  - Spinach
  - Sweet corn
  - Tomatoes
  - Watermelons
  - Other vegetables
- Oil crops:
  - Cottonseed
  - Flaxseed
  - Peanuts
  - Soybeans
  - Other oil crops
- Cotton lint
- Tobacco

Livestock:
- Dairy products and honey:
  - Butter
  - Cheese
  - Cream
  - Honey
  - Ice cream
  - Milk
- Meat animals:
  - Cattle and calves
  - Hogs
  - Sheep and lambs
- Poultry and eggs:
  - Chickens
  - Eggs
  - Turkeys
- Mohair and shorn wool:
  - Mohair
  - Wool, shorn

For the years 1909-1923, the product group figures were extrapolated from 1924 by means of indexes of production for 12 groups of agricultural products: food grains, feed grains, sugar crops, fruits and tree nuts, vegetables and miscellaneous crops, oil crops, cotton, tobacco, dairy products and honey, meat animals, poultry and eggs, and mohair and shorn wool. These indexes were taken from "Volume of Production of Crops and of Livestock Products for Sale and for Home Consumption, 1910-46," The Farm Income Situation, U.S. Department of Agriculture FIS-83, December 1946.

For years prior to 1909, the production series used for extrapolation purposes were taken from "Gross Farm Income and Indices of Farm Production and Prices in the United States, 1869-1937," by Frederick Strauss and Louis H. Bean, U.S. Department of Agriculture, Technical Bulletin No. 703, December 1940.

Figures for horses and mules born each year were added to the production series on the basis of data from the Census of Agriculture.

Imports, Exports, and Consumption Series

The agricultural imports and exports were compiled primarily by the AMS and ESCS to measure the supply and utilization of farm commodities. The basic source of these figures is the Bureau of the Census import and export data. The AMS and ESCS imports and exports were supplemented by import figures for rubber, silk, vegetable fibers, and spices not covered by AMS and ESCS and by certain imports and exports of cattle, hogs, live horses and mules, and live poultry for breeding.

Beginning in 1924, the AMS and ESCS series provide stock changes and separate figures for food and nonfood use which were used in computing the consumption series.

For years prior to 1924, Bureau of the Census quantity series for imports and exports of commodities which are components of the AMS groups used for later years were combined to the AMS group level by use of unit-value weights. These subgroup series were used to extrapolate figures for each AMS group from the 1924 figures. In a few cases the available series represented nearly complete coverage of the commodity group, but in most cases the coverage was considerably less, particularly for nonfood commodities.

FISHERY AND WILDLIFE PRODUCTS

Fishery Series.

Production measures were developed from series for U.S. Commercial Landings of 66 classes of finfish and 24 classes of shellfish as tabulated by the National Marine Fisheries Service (NMFS), U.S. Department of Commerce, formerly the Fish and Wildlife Service (FWS), U.S. Department of the Interior. For the years 1930, 1940, 1950, 1960, and annually 1967-1977, these series were combined into 14 groups of finfish and 9 groups of shellfish. The groups are:

Finfish:
- Anchovies
- Cod
- Flounders
- Haddock
- Halibut
- Sea herring
- Menhaden
- Rockfishes
- Salmon:
  - Chinook and silver
  - Chum, pink, and red
- Sea trout
- Snapper
- Tuna
- Other finfish

Shellfish:
- Clams:
  - Hard
  - Soft, surf, and other
- Crabs
- Lobsters
- Scallops
- Shrimp:
  - South Atalntic and Gulf
  - New England, Pacific, and other
- Squid and other

Quantity figures for each of these groups were multiplied by the average 1972 unit value for the group, computed by use of corresponding NMFS total value figures. For years prior to 1967, fishery foods and fishery nonfoods series, developed by FWS and weighted by average 1967 prices, were used to interpolate or extrapolate totals for production of all fishery foods and for fishery nonfoods.

The FWS considered that production data for the period after 1930 represent 97 or 98 percent of the total dollar value of commercial landings of fishery products. Coverage in the period prior to 1930 is much more uncertain because of the lack, except for the year 1908, of good benchmark data. The production series for this early period contains many estimates, the figures for some years being entirely estimated by means of straight-line interpolation between benchmarks. Production figures do not include the large recreational catch which is estimated for 1970 to have amounted to 1.6 billion pounds of marine (saltwater) finfish. This was about the same as the landings of edible finfish by commercial fishermen. Surveys of the recreational catch are available only for 1960, 1965, and 1970. For all finfish the comparisons are:

Year	Finfish (million pounds)		
	Total	Commerical landings	Recreational catch
1970	5,594	4,017	1,577
1965	5,421	3,947	1,474
1960	5,630	4,250	1,380

For 1967-1977, foreign trade data from the Bureau of the Census were converted, where necessary, to round weight (live weight) equivalents by use of factors supplied by NMFS. Thus total imports and exports equivalents were developed for each of the above 23 groups of fish. These were weighted by the 1972 unit values used for production. Apparent consumption was computed from the production, imports, and exports aggregates for each year. Consumption was segregated into foods and nonfoods, primarily on the basis of NMFS classifications as edible and nonedible (industrial).

For the years 1924-1967, the foreign-trade series for fishery products, in constant 1967 dollars, were assembled by the Fish and Wildlife Service, and these were used to extrapolate series comparable to the 1967-1977 series in 1972 dollars. For prior years, the President's Materials Policy Commission staff compiled figures showing the values of fish imports and exports, based on U.S. Department of Commerce records. These values were then deflated, by means of indexes of fish prices, to obtain estimates of the quantities imported and exported. Data measuring the foreign trade in fishery products represent essentially complete coverage in terms of value of the items imported and exported, and the errors introduced in converting to quantities measured in 1972 dollars are believed to be small.

Wildlife Products

Wildlife products are represented by furs which constitute the major portion of this classification.

A significant exclusion is the taking of migratory birds. It was estimated in 1975, by the Fish and Wildlife Service of the U.S. Department of the Interior, that about 28.5 million pounds of meat is obtained annually in taking such migratory birds. However, while annual data on the taking of some major classes of such birds are available back to 1955, it did not seem that there was enough information to warrant inclusion of such series.

Relatively incomplete production data are available on furs for the early years. For this reason, the production measures for manufactures census years were computed from fairly reliable consumption, imports, and exports figures which could be developed from census statistics. Incomplete coverage series on the number of wild animals trapped were then used to interpolate between these benchmark figures for the later years, and straight-line interpolation of consumption was accepted for early years.

For all census years in the period 1899-1967, consumption figures in current dollars were obtained as the cost of furs bought by the fur goods industry and by the fur dressing and dyeing industry, plus exports of domestic dressed furs, less shipments of dressed furs by the fur dressing and dyeing industry. These aggregate values for fur consumption were reduced to constant 1967 dollars by use of a price index based in part on imports and exports of furs for the United States and in part on a Canadian fur price index. Figures for consumption in intercensal years prior to 1935 were estimated by straight-line interpolation. From this consumption series for census years and years prior to 1935, the production series was estimated by adding exports and subtracting imports.

Beginning with 1969, better coverage of production became available: The U.S. Department of Agriculture began collecting data on the large mink production on farms and the Fur Resources Committee (FRC) in late years obtained nearly complete coverage of animals trapped. FRC average pelt prices in the 1971-1972 season were used as weights for most types of fur produced domestically, but for mink the average unit value of 1972 exports of undressed skins was used since no value data were collected for mink from fur farms.

For 1935-1969, fur production series were developed from figures for the number of wild animals trapped, as reported by the Fish and Wildlife Service. For 1954-1969, the series used for interpolating between the 1954, 1958, 1963, and 1967 census figures and for extrapolating for 1968 and 1969 represented data for 43 States, including Alaska and the Pribilof Islands, covering 19 types of wild animals caught. The series used for interpolation for the period 1947-1954 represented 23 States, including Alaska and the Pribilof Isalnds, and for 1935-1947, 25 States, including Alaska and the Pribilof Isalnds, and covered 12 types of wild animals caught for the entire period 1935-1954. The sample used for the period after 1954 covered about 21 percent of the estimated total value of fur production in 1954, 17 percent in 1958, 23 percent in 1963 and 17 percent in 1969. The sample used for 1947-1954 represented about 36 percent coverage in 1947 and about 15 percent in 1954. In developing these annual series, the qualtities for different types of furs produced were weighted by the 1954 average unit values of furs exported, wherever such data were available, and by 1954 average unit import values where export data were not available. Even though no separate statistics are available on fur bearing animals produced on farms prior to 1969, such production is implicity included since the production totals are computed from Census consumption, import, and export figures which include furs from farms.

For the period 1969-1977, import and export quantity series were weighted by FRC prices in 1971-1972 or by 1972 average unit values of imports. For the period 1935-1969, quantity import and export series were weighted by 1967 average unit values of imports or exports. For years prior to 1935, the fur import and export quantities were obtained by deflating the corresponding total values by related price indexes. The foreign-trade data represent essentially complete coverage of raw and dressed furs.

The series in 1967 dollars for years prior to 1969 were used to extrapolate the corresponding series in 1972 dollars.

FOREST PRODUCTS

The series for forest products is based on statistics compiled by the Forest Service and the Bureau of the Census. Forest products classes were combined into three major groups: sawlogs, pulpwood, and other forest products. The other forest products series included: veneer logs, fuelwood (roundwood), other (except naval stores), turpentine, and rosin. These seven product classes, measured in physical quantity units were combined by means of unit-value weights. The basic unit values of forest products at first point of market in 1972 were supplied by the Forest Service, or for naval stores taken from Crop Reporting Board (CRB) reports. The quantity of production, imports, and exports series used were as compiled by the Forest Service and CRB, of the Department of Agriculture, although the basic import and export series, and part of the production series were collected by the Bureau of the Census.

The production series represent about 99 percent of the total value of forest products from the United States, including Alaska. The major item not included is Christmas trees. (Maple syrup and maple sugar are covered in the agricultural production series rather than in forest products.) Other minor forest products excluded are tanbark, holly, misletoe, ferns, wild nuts, and balsam.

The import and export series, which represent nearly as high coverage of the total value of foreign trade in forest products, include the pulpwood equivalent of processed products, such as wood pulp, paper, and paperboard products, and such products as shingles and cork.

For the consumption series in terms of broad use classes, the Forest Service provided not only the series for roundwood fuelwood which is a part of the other forest products group, but also a series of estimates for residue fuelwood which is implicitly included in the sawlogs series, as well as appropriate unit-value weights for each of these series based on sample market values of such products in various States.

MINERALS

Production Series

The mineral production series include 91 mineral products, which correspond to over 99 percent of the total value of mineral output as reported in the 1939, 1954, 1958, 1963, 1967, and 1972 censuses of mineral industries. Comparable measures of coverage cannot be made for other years. However, an

analysis of production information available for the few mineral items omitted indicates that coverage was not significantly lower for such years.

In constructing the PMPC production measures, extensive use was made of Dr. Y. S. Leong's worksheets for construction of his index of mineral production. The production series for 61 mineral products were taken from these worksheets for all or part of the period 1900-1948 and most of the comparable 1949 and 1950 figures were also supplied by Dr. Leong. In cases where a mineral first appeared in the Leong index for a year later than 1900, its output for earlier years of the half century was estimated from related data.

The basic source for these and all other annual mineral production figures used was from the Bureau of Mines, primarily as published in its Minerals Yearbook (prior to 1932, Mineral Resources of the United States). However, most of the 1972 unit values used as weights represent Bureau of the Census figures which quite uniformly provide unit values at producing operations.

The minerals included in the production measures are:

Iron and Ferroally Ores
(Measured in terms of metal contained)

- Iron
- Manganese
- Tungsten
- Chromium
- Cobalt
- Molybdenum
- Nickel

Other Metal Ores
(In general, measured in terms of metal contained)

- Gold
- Silver
- Copper
- Lead
- Zinc
- Bauxite
- Mercury
- Titanium
- Uranium-radium-vanadium
- Antimony
- Cadmium
- Magnesium
- Platinum-group metals
- Selenium
- Tellurium
- Tin

Mineral Fuels

- Anthracite
- Bituminous coal and lignite
- Crude petroleum
- Natural gas
- Natural gasoline
- Liquefied petroleum gases

Mineral Construction Minerals

- Dimension stone:
  - Limestone
  - Granite
  - Slate
  - Marble
  - Basalt
  - Sandstone
  - Miscellaneous stone
- Crushed and broken stone:
  - For cement manufacture
  - For lime manufacture
  - Other limestone
  - Granite
  - Slate
  - Marble
  - Basalt
  - Sandstone
- Crushed and broken stone—Continued
  - Miscellaneous stone
- Sand and gravel:
  - Construction sand
  - Gravel
  - Glass sand
  - Other industrial sand, except for abrasives
- Fire clay
- Magnesite
- Common clay and shale
- Gypsum
- Native asphalt and bitumens
- Asbestos
- Perlite
- Shell

Chemical and Fertilizer Minerals

- Barite
- Fluorspar
- Potash
- Borates
- Phosphate rock
- Sodium chloride
- Sulfur and pyrites
- Arsenious oxide
- Bromine
- Calcium and calcium-magnesium chloride
- Magnesium compounds
- Sodium carbonate
- Sodium sulfate
- Iodine

Abrasives and Miscellaneous Minerals

- Fuller's earth
- High-grade clay:
  - Bentonite
  - Kaolin
  - Ball clay
  - Miscellaneous high-grade clay
- Feldspar
- Mica sheet
- Mica scrap
- Pumice and pumicite
- Talc and soapstone
- Emery and garnet
- Grinding pebbles and tube-mill liners
- Grindstones, pulpstones, and other special silica stone products
- Quartz, ground sand, and sandstone for abrasive purposes
- Tripoli and rottenstone
- Peat
- Diatomite
- Graphite
- Greensand
- Vermiculite

Secondary Production

The basic series presented throughout this report represent primary production only. For the purpose of measuring overall raw materials requirements, this is the preferred measure. Moreover, for most raw materials, adequate data are not available to construct annual series for secondary production. However, there are more adequate data for nonferrous metals, and series for secndary production of such metals have been compiled and are presented in table A10 for the period 1910-1977. This table also reproduces the primary production series which are included in table A9 and elsewhere, and shows the combined total of primary and secondary production of these commodities. The unit value weights used in constructing these series for scondary metals are the same as those used for primary metals.

Imports and Exports Series

Many of the foreign-trade quantity figures used for minerals for 1900-1950 were compiled especially for PMPC by the Bureau of Mines staff, based, however, on census data for imports and exports. These figures were supplemented for the same period by foreign-trade figures for chemicals and selected other commodities compiled for PMPC by the Office of International Trade, U.S. Department of Commerce. Other figures for this period, and those for all commodities in later years, were compiled directly from census data, either as published in census reports or as specially compiled by Census for Bureau of Mines use and published in reports of that agency. Where reported quantity data were lacking, the series were completed by estimates based on reported value data, on values for groups of commodities in which an item was included, or occasionally on the movement of related items. These estimates amounted to 2 percent or less of the constant-dollar value of the combined production, imports, and exports of all minerals in any year, and less than 1 percent in the later years. However, the estimates amounted to 3 to 6 percent of the totals for "other metals," "construction materials," and "other nonmetallic minerals," in the period 1900-1920.

The figures for imports and exports were weighted by the same 1972 unit values at the mine as were used in weighting the production series, insofar as the items were produced domestically. In general, the 1972 average unit values of imports were used as weights for minerals not produced in the United States.

In addition to the 91 mineral products included in the production series, the mineral imports and consumption series include the following materials, for the mineral construction materials series: chalk; for the chemical and fertilizer minerals series: guano; and for the abrasives and miscellaneous minerals series: corundum, cryolite, diamonds (cut but unset and rough and uncut), emeralds, kyanite, and nepheline syenite.

For imports or exports of semiprocessed or processed items, the major raw materials contained were estimated. Thus, the mineral equivalents of the foreign trade statistics for paints, other chemicals, and machinery were computed and added to the figures for the crude minerals. For example, an import of aluminum sulfate was represented by additions to the bauxite and sulfur series. Many of these conversions were made by the Bureau of Mines staff and many others by the PMPC staff for the period 1900-1950 and comparable conversions were made for this report for later years.

Metal Equivalent of Machinery and Vehicles

The following methods were employed to obtain the metal equivalent of machinery-and-vehicles exports and imports. The available series for tonnage or value of machinery and vehicles imports and exports were converted to metal content primarily on the basis of census of manufactures or other Census data on iron and steel, copper, and aluminum (including ingot metal, mill shapes, castings, and forgings) used in the production of comparable classes of products in the United States. Such figures were available for 1943-1944, 1947, 1954, 1958, 1963, 1967, and 1972. Some data on materials contents were also obtained from private firms.

Beginning in 1970, all estimates, except for merchant vessels exported, were based on the value of 17 classes of machinery and vehicles imported or exported. Factors for tonnages of iron, copper, and aluminum used per dollar value of shipments for each of these 17 classes were developed from the 1972 Census of Manufactures statistics. These factors were applied to the dollar values of imports and exports for years 1972-1977, after deflating the value for each class in each year to its 1972 equivalent by a corresponding BLS price index. For 1970 and 1971, corresponding factors were obtained by interpolating between such factors from the 1967 and 1972 censuses of manufactures after adjusting for price changes. For this period, the iron content of merchant vessels exported was estimated directly from the deadweight tonnage of such vessels as supplied by the U.S. Maritime Administration.

For years prior to 1970, the esimates, except for the specified Census years, were obtained by developing 5 series for machinery and vehicles imported or exported. These series were used for interpolation or extrapolation purposes, or in the case of merchant vessels to supplement the data based on the Census of Manufactures. They are: (1) Metal content of exports by vessel based on indexes constructed from data collected by the Chief of Engineers of the U.S. Army for annual tonnages of types of machinery and vehicles shipped by vessel for the years 1920 through 1946. The 1947-1969 figures were based on census data. (2) Shipments by rail and truck derived for 1920-1969 by deflating the total value of exports of machinery and vehicles to Canada and Mexico by a price index. (3) Shipments by air and all other means, for the earlier years largely merchant vessels and aircraft exported under their own power, estimated in part from the total light displacement weight of merchant-vessel exports available for the period 1938-1969 and in part from census air export tonnages for 1967-1969. This type of export was negligible prior to 1938. (4) Exports for years prior to 1920 extrapolated by deflating the total value of machinery and vehicles exported by a price index. (5) For imports, separate series developed for Canadian and non-Canadian items, making use of Census figures for the value per ton of waterborne imports.

The iron content of machinery and vehicles exported, as thus estimated, proved to be substantial. It amounted to about 5.5 million tons at the peak volume of merchant-vessel exports in 1947. In 1950, it was about 2.1 million tons, or a little over 4 percent of the U.S. production of iron, and in 1976, 6.5 million tons, nearly 14 percent of U.S. production. The iron-ore equivalent of machinery-and-vehicles imports amounted to less than 3 percent of exports in 1950, but had risen to over 84 percent of exports in 1977.

The copper content of machinery and vehicles imports and exports were both at a peak in 1977, amounting to 187 thousand tons for exports and 142 thousand tons for imports, 12.4 and 9.4 percent, respectively, of domestic copper ore production. This represented an increase from 46 thousand tons for exports in 1950, and from 2 thousand tons for imports.

The aluminum content of machinery and vehicles imports was at a peak in 1977 and exports was at a peak in 1976. In terms of bauxite equivalent, such exports in 1977 amounted to about 1,166 thousand tons, 58 percent of domestic bauxite production. The corresponding imports were about 837 thousand tons, 42 percent of domestic production. These represented increases from only 36 thousand tons of bauxite equivalent for exports in 1950, and 1 thousand tons for bauxite imports.

Stocks and Consumption

Stocks figures available in the Bureau of Mines publications were used to adjust computed "apparent consumption" figures to actual consumption. The technique employed was to develop a net adjustment for each commodity in each year by multiplying the available quantity of stocks data by the unit value of the commodity used in the production, imports, and exports series; then for each year subtract the beginning of year figure from the end of year figure.

Stocks figures were available to correspond to nearly 90 percent of the total value of mineral consumption in the last 4 decades of the series and a somewhat lower percentage in earlier years, but even for much of the first 3 decades to over 80 percent of consumption. The available stocks figures represent, in general, not only sotcks at mines, but also, for many of the commodities, stocks of recognizable mineral products in the hands of consumers. Table A11 lists the commodities on which stocks figures were used, the nature of these stocks, and the aggregate value of such stocks in selected periods. For gold and silver, no direct stock adjustment was made, but these commodities were represented in the consumption series by U.S. Bureau of the Mint figures for net consumption in industry and the arts.

DIRECT ENERGY

Hydroelectric energy production, which is the major component of this group in the period covered, was supplied by the Federal Power Commission, which also provided data on geothermal energy production. Energy supplied by wind was estimated from figures for horsepower of windmills and sailing vessels as shown in Historical Statistics of the United States 1970. Solar energy used for space heating and hot water was estimated on the basis of data supplied by the National Solar Heating and Cooling Information Center.

Since separate unit values are not available for direct energy, production was weighted by the cost per unit for supplying an equivalent amount of energy by use of coal, oil, and gas in 1972. The unit values for the latter items are those used for them as weights for mineral products in this report.

Consumption was assumed the same as production.

RAW MATERIALS CONSUMPTION, BY END USE

The raw-materials series have been regrouped in terms of the major purposes for which the materials are used (see table A5). This classification represents materials used in the entire U.S. economy, including the raw-materials industries.

Minerals usually used for energy purposes are increasingly being absorbed for nonfuel uses. Some such uses are for synthetic rubber, carbon black, and other chemical raw materials; for lubricants, asphalt, road oil, waxes; and as carbon in iron and electrodes. The approximate significance of such users is indicated by the following figures:

Period	Mineral fuels used for nonfuel purposes as a percent of total mineral fuels use
1970-1977	6.8
1960-1969	6.1
1950-1959	4.3
1940-1949	3.5
1930-1939	2.9
1920-1929	2.3
1910-1919	1.2
1900-1909	1.0

The figures in table A5 exclude such uses from the figures presented for "energy materials" and include them in "physical-structure materials."

It should be noted that the relative importance of the foods, energy materials, and physical-structure materials segments of the consumption pattern is somewhat influenced by the consumption of raw materials within the raw-materials industries, although such duplication is considerably less than in the series included in the PMPC report and in Working Paper Number 1. In these reports, the value of feed for farm animals (except horses and mules) and seed were included but are excluded here as they were in all later Working Papers of this series. However, the mineral fuels consumed in producing raw materials are included, as well as the indirect consumption of raw materials represented by the capital-goods requirements of the raw-materials industries. Available staff facilities did not permit extensive analysis of the magnitude of consumption of raw materials within the raw-materials industries. It appears, however, that 4 to 7 percent of all energy has been used in mineral-fuel production.

In order to compare the constant dollar figures for energy materials in table A5 with a comparable table in Btu equivalents, table A12 is included.

FURTHER REFINEMENTS

In general, the raw-materials measures are unadjusted for changes in quality of the specified materials. In the case of agricultural products, this probably introduced a slight downward bias, since the quality of these products, as marketed, has probably increased. For minerals and forest products, the bias is probably upward, reflecting depletion of the richest mineral deposits and most valuable stands of virgin forests.

As an indication of the effect which quality changes can have on the production series, the constant-dollar aggregates for crude petroleum were recomputed to adjust for the change from principally Pennslyvania-grade crude to other types of crude over the first half of this century. Prior to the 1950's the unit value of Pennsylvania-grade crude was approximately twice as high as the average for all other crudes. For analytical purposes, therefore, this comparison was made in terms of the previously used 1935-1939 average unit values rather than in terms of the 1972 unit values used elsewhere in this report. For the 1935-1939 base period, the average value per barrel of Pennsylvania-grade crudes was $2.09, as compared with $1.06 for all other crudes. Production aggregates were constructed, weighting these two broad grades of crudes separately. These figures yielded value aggregates almost twice as high in early years as the aggregates unadjusted for change in quality:

Year	Crude petroleum production aggregates (measured in millions of constant 1935-1939 dollars)	
	Unadjusted for quality changes	Adjusted for quality changes
1950	2,127.5	2,113.2
1925	823.3	833.1
1900	68.6	122.1

Although the percent increase in production between 1900 and 1950 indicated for the unadjusted series was nearly twice as much as for the quality adjusted series, the effect on value aggregates was very small for later years when quite significant quantities of crude oil were produced.

For many minerals the quality changes have been compensated for by concentration or other preparation of the crude materials before they are measured as marketable mineral products. Such changes in grade of crude materials mined would not affect the production measures presented in this report. Moreover, for some series, such as iron ore and major nonferrous-metal ores, the series measures are in terms of recoverable metals contained in the ores and, hence, are unaffected by changes in grades of ores marketed.

TABLE A1. Production of Raw Materials in the United States in Constant 1972 Dollars, by Broad Product Groups: 1900 to 1977

(Millions of dollars)

Year	All raw materials, total	Agricultural materials			Fishery and wildlife products			Direct energy
		Total	Crops	Livestock	Total	Fishery products	Wildlife products	
1977	91,263	55,434	23,118	32,316	958	838	120	828
1976	89,497	53,608	21,307	32,301	913	811	102	1,072
1975	87,699	52,697	22,325	30,372	795	697	98	1,132
1974	85,289	48,596	17,645	30,951	818	719	99	1,133
1973	86,842	49,007	19,774	29,233	787	700	87	1,025
1972	85,776	48,235	17,421	30,814	841	746	95	1,025
1971	85,863	49,053	17,852	31,201	862	762	100	998
1970	83,147	45,593	15,298	30,295	924	795	129	928
1969	82,667	46,382	16,727	29,655	833	719	114	938
1968	81,535	46,434	16,641	29,793	826	735	91	836
1967	79,820	45,942	16,427	29,515	856	749	107	833
1966	76,822	43,404	14,869	28,535	926	828	98	733
1965	76,942	44,726	16,539	28,187	931	830	101	730
1964	74,806	43,644	14,500	29,144	859	758	101	667
1963	72,967	43,109	15,428	27,681	857	757	100	626
1962	70,156	41,416	14,575	26,841	900	814	86	638
1961	68,695	40,852	14,088	26,764	859	765	94	577
1960	68,803	41,097	14,937	26,160	869	763	106	553
1959	66,868	39,661	13,985	25,676	848	744	104	524
1958	65,372	39,288	14,626	24,662	916	802	114	532
1957	66,591	38,814	13,376	25,438	891	769	122	494
1956	67,832	39,609	13,548	26,061	931	827	104	464
1955	65,247	38,467	13,509	24,958	878	777	101	430
1954	61,679	37,041	13,207	23,834	923	821	102	413
1953	62,176	36,652	13,159	23,493	925	811	114	406
1952	60,866	35,711	13,301	22,410	922	820	102	406
1951	59,548	34,040	12,376	21,664	888	794	94	387
1950	57,610	33,894	12,181	21,713	897	836	61	374
1949	55,856	34,415	13,048	21,367	984	907	77	351
1948	59,828	35,537	14,733	20,804	1,070	981	89	322
1947	57,980	34,513	12,136	22,377	1,027	936	91	308
1946	56,592	34,997	12,784	22,213	1,310	1,209	101	308
1945	55,860	34,510	11,769	22,741	1,323	1,244	79	314
1944	58,079	35,881	12,268	23,613	1,123	1,046	77	293
1943	54,441	32,666	10,044	22,622	1,123	1,046	77	294
1942	54,619	33,057	12,275	20,782	1,018	951	67	257
1941	50,928	30,233	11,438	18,795	915	842	73	206
1940	48,180	29,351	11,198	18,153	832	754	78	193
1939	45,354	28,137	11,086	17,051	799	738	61	178
1938	43,614	28,039	11,661	16,378	764	697	67	181
1937	46,998	29,157	13,319	15,838	740	673	67	180
1936	41,302	24,929	8,565	16,364	716	657	59	160
1935	40,398	26,283	11,377	14,906	607	560	47	159
1934	38,383	25,307	7,947	17,360	598	555	43	136
1933	38,083	25,769	9,022	16,747	554	512	42	139
1932	37,742	26,466	10,343	16,123	542	475	67	136
1931	41,356	27,748	11,593	16,155	635	569	66	123
1930	42,909	26,433	10,572	15,861	762	679	83	133
1929	45,366	26,495	10,759	15,736	744	696	48	141
1928	44,321	26,715	11,077	15,638	685	643	42	142
1927	44,165	26,396	10,719	15,677	685	635	50	126
1926	45,283	27,345	11,545	15,800	629	585	44	116
1925	43,785	26,665	10,999	15,666	566	524	42	100
1924	43,807	27,121	11,008	16,113	569	535	34	94
1923	44,077	26,451	10,525	15,926	496	460	36	92
1922	40,036	25,799	10,707	15,092	545	493	52	84
1921	36,976	23,803	9,599	14,204	506	468	38	74
1920	42,042	26,118	11,760	14,359	577	543	34	80
1919	41,016	26,415	11,076	15,339	585	557	28	67
1918	42,296	26,489	11,380	15,109	603	568	35	62
1917	41,334	25,191	10,854	14,337	609	574	35	57
1916	40,464	24,494	10,170	14,324	597	565	32	50
1915	39,712	25,183	11,237	13,946	573	543	30	43
1914	39,649	25,252	11,821	13,431	600	532	68	37
1913	39,829	24,421	10,685	13,736	577	504	73	36
1912	39,868	24,900	11,160	13,740	543	477	66	33
1911	38,905	24,534	10,566	13,968	531	479	52	29
1910	37,838	23,256	9,900	13,356	536	477	59	27
1909	37,387	23,334	9,863	13,471	536	474	62	25
1908	36,847	23,792	10,114	13,678	541	477	64	22
1907	37,131	23,012	9,704	13,308	531	479	52	21
1906	36,735	23,518	10,469	13,049	530	482	48	20
1905	35,120	22,471	9,593	12,878	531	482	49	18
1904	34,101	22,196	9,748	12,448	531	485	46	15
1903	33,091	21,326	9,144	12,182	532	477	55	14
1902	31,683	20,667	9,206	11,461	514	474	40	13
1901	31,300	20,647	8,754	11,893	512	468	44	12
1900	30,545	20,293	8,711	11,582	508	452	56	11

TABLE A1. Production of Raw Materials in the United States in Constant 1972 Dollars, by Broad Product Groups: 1900 to 1977—Continued

(Millions of dollars)

Year	Forest products				Minerals					
	Total	Sawlogs	Pulpwood	Other forest products	Total	Iron and ferroalloy metals	Other metals	Mineral fuels	Construction materials	Other nonmetalic minerals
1977	5,645	3,338	918	1,389	28,398	926	1,831	20,802	3,117	1,722
1976	5,517	3,207	963	1,347	28,387	1,199	1,854	20,722	2,950	1,662
1975	5,001	2,886	896	1,219	28,074	1,203	1,680	20,803	2,816	1,572
1974	5,387	3,061	1,093	1,233	29,355	1,279	1,866	21,289	3,271	1,650
1973	5,755	3,409	978	1,368	30,268	1,331	1,958	21,995	3,405	1,579
1972	5,657	3,335	924	1,398	30,018	1,174	1,934	22,337	3,075	1,498
1971	5,543	3,270	943	1,330	29,407	1,230	1,830	21,968	2,970	1,409
1970	5,452	3,186	1,016	1,250	30,250	1,336	2,004	22,470	3,019	1,421
1969	5,537	3,293	950	1,294	28,977	1,286	1,829	21,354	3,041	1,467
1968	5,551	3,350	897	1,304	27,888	1,245	1,517	20,769	2,946	1,411
1967	5,325	3,189	845	1,291	26,864	1,202	1,295	20,147	2,855	1,365
1966	5,555	3,359	845	1,351	26,204	1,254	1,679	19,084	2,838	1,349
1965	5,594	3,374	820	1,400	24,961	1,195	1,612	18,041	2,891	1,222
1964	5,558	3,353	759	1,446	24,078	1,145	1,576	17,504	2,735	1,118
1963	5,313	3,186	708	1,419	23,062	995	1,516	16,969	2,582	1,000
1962	5,087	3,046	680	1,361	22,115	937	1,555	16,167	2,495	961
1961	4,976	2,942	656	1,378	21,431	953	1,503	15,691	2,363	921
1960	4,990	3,023	682	1,285	21,294	1,142	1,435	15,506	2,315	896
1959	5,375	3,418	624	1,333	20,460	791	1,203	15,312	2,291	863
1958	4,941	3,070	574	1,297	19,695	858	1,283	14,634	2,142	778
1957	4,956	3,034	623	1,299	21,436	1,272	1,410	15,837	2,083	834
1956	5,546	3,522	656	1,368	21,282	1,196	1,355	15,826	2,043	862
1955	5,416	3,442	583	1,391	20,056	1,252	1,194	14,905	1,915	790
1954	5,237	3,353	519	1,365	18,065	966	1,050	13,588	1,719	742
1953	5,279	3,397	506	1,376	18,914	1,354	1,147	14,179	1,521	713
1952	5,331	3,463	480	1,388	18,496	1,114	1,179	14,032	1,495	676
1951	5,394	3,439	484	1,471	18,839	1,304	1,136	14,300	1,435	664
1950	5,397	3,513	398	1,486	17,048	1,064	1,118	12,972	1,302	592
1949	4,894	2,980	343	1,571	15,212	926	948	11,666	1,147	525
1948	5,409	3,428	396	1,585	17,490	1,092	1,021	13,643	1,179	555
1947	5,274	3,280	367	1,627	16,858	1,026	1,034	13,195	1,069	534
1946	5,045	3,156	338	1,551	14,932	790	782	11,929	941	490
1945	4,470	2,604	304	1,562	15,243	1,020	923	12,108	737	455
1944	4,943	3,050	311	1,582	15,839	1,095	1,213	12,352	720	459
1943	5,033	3,175	275	1,583	15,325	1,230	1,407	11,413	833	442
1942	5,353	3,362	302	1,689	14,934	1,257	1,384	10,865	1,023	405
1941	5,533	3,383	287	1,863	14,041	1,069	1,317	10,268	1,012	375
1940	5,013	2,885	251	1,877	12,791	851	1,234	9,556	851	299
1939	4,804	2,662	198	1,944	11,436	605	1,070	8,675	831	255
1938	4,430	2,299	161	1,970	10,200	359	896	8,034	680	231
1937	4,834	2,685	181	1,968	12,087	819	1,151	9,107	741	269
1936	4,658	2,558	154	1,946	10,839	553	923	8,415	712	236
1935	4,195	2,123	134	1,938	9,154	347	677	7,445	489	196
1934	3,840	1,743	122	1,975	8,502	276	506	7,062	485	173
1933	3,721	1,588	122	2,011	7,900	193	414	6,707	427	159
1932	3,329	1,252	100	1,977	7,269	109	440	6,122	473	125
1931	3,891	1,849	122	1,920	8,959	331	705	7,083	656	184
1930	4,816	2,715	124	1,977	10,765	616	922	8,116	888	223
1929	5,699	3,585	132	1,982	12,287	770	1,196	9,068	1,025	228
1928	5,476	3,400	118	1,958	11,303	660	1,118	8,352	963	210
1927	5,572	3,449	112	2,011	11,386	656	1,063	8,506	962	199
1926	5,739	3,681	112	1,946	11,454	717	1,114	8,516	911	196
1925	5,864	3,799	102	1,963	10,590	660	1,092	7,760	893	185
1924	5,851	3,657	97	2,097	10,172	567	1,037	7,586	812	170
1923	6,029	3,799	94	2,136	11,009	732	991	8,321	781	184
1922	5,547	3,267	91	2,189	8,061	493	738	6,074	599	157
1921	5,058	2,685	76	2,297	7,535	303	483	6,135	497	117
1920	5,701	3,241	102	2,358	9,565	710	868	7,266	546	175
1919	5,643	3,195	90	2,358	8,306	634	854	6,198	477	143
1918	5,437	2,950	91	2,396	9,705	760	1,207	7,145	426	167
1917	5,793	3,314	95	2,384	9,684	806	1,269	6,874	574	161
1916	6,175	3,683	90	2,402	9,148	793	1,334	6,208	681	132
1915	5,854	3,424	84	2,346	8,059	578	1,113	5,653	610	105
1914	6,198	3,744	74	2,380	7,562	427	926	5,455	656	98
1913	6,559	4,069	73	2,417	8,236	644	947	5,845	692	108
1912	6,667	4,162	71	2,434	7,725	574	940	5,445	667	99
1911	6,525	3,976	69	2,480	7,286	460	880	5,146	707	93
1910	6,650	4,112	64	2,474	7,369	601	852	5,128	695	93
1909	6,604	4,112	65	2,427	6,888	545	872	4,694	690	87
1908	6,363	3,880	54	2,429	6,129	382	760	4,314	596	77
1907	6,791	4,252	63	2,476	6,776	554	720	4,796	621	85
1906	6,585	4,252	59	2,274	6,082	511	780	4,077	629	85
1905	6,270	4,022	52	2,196	5,830	457	741	3,950	605	77
1904	6,223	3,972	51	2,200	5,136	295	687	3,539	549	66
1903	6,084	3,836	47	2,201	5,135	376	614	3,530	555	60
1902	5,935	3,679	42	2,214	4,554	384	617	2,919	575	59
1901	5,800	3,530	39	2,231	4,329	313	585	2,880	491	60
1900	5,671	3,381	36	2,254	4,062	299	587	2,630	490	56

TABLE A2. Imports of Raw Materials Into the United States in Constant 1972 Dollars, by Broad Product Groups: 1900 to 1977

(Millions of dollars)

Year	All raw materials		Agricultural materials			Fishery and wildlife products		
	Total	Total, except gold	Total	Crops	Livestock	Total	Fishery products	Wildlife products
1977	23,971	23,746	5,996	4,249	1,747	1,141	1,083	58
1976	22,165	22,030	6,303	4,507	1,796	1,179	1,124	55
1975	18,880	18,745	5,782	4,329	1,453	1,011	954	57
1974	19,933	19,799	5,620	4,076	1,544	1,017	968	49
1973	20,622	20,427	6,171	4,280	1,891	1,114	1,056	58
1972	18,812	18,502	6,263	4,387	1,876	1,324	1,271	53
1971	16,532	16,167	5,685	4,017	1,668	1,074	1,006	68
1970	15,610	15,273	5,552	3,733	1,819	1,092	1,020	72
1969	15,137	14,841	5,413	3,697	1,716	1,118	1,027	91
1968	15,769	15,468	5,833	4,089	1,744	1,344	1,231	113
1967	14,176	13,706	5,233	3,700	1,533	1,094	986	108
1966	13,743	13,682	5,265	3,648	1,617	1,133	1,016	117
1965	12,724	12,577	4,792	3,427	1,365	985	876	109
1964	12,084	12,024	4,816	3,540	1,276	938	840	98
1963	12,086	12,021	5,324	3,665	1,659	856	747	109
1962	12,085	11,867	5,285	3,698	1,587	841	728	113
1961	10,914	10,833	4,895	3,601	1,294	704	597	107
1960	10,933	10,461	4,641	3,524	1,117	627	539	88
1959	11,693	11,263	5,163	3,813	1,350	638	549	89
1958	10,683	10,272	4,569	3,410	1,159	578	493	85
1957	10,687	10,296	4,327	3,481	846	540	452	88
1956	10,088	9,899	4,243	3,507	736	528	439	89
1955	9,436	9,288	4,148	3,377	771	511	416	95
1954	8,518	8,463	3,816	3,186	630	491	406	85
1953	9,140	9,072	4,401	3,636	765	487	396	91
1952	9,820	8,751	4,390	3,491	899	482	382	100
1951	8,248	8,130	4,338	3,422	916	453	328	125
1950	8,872	8,637	4,470	3,402	1,068	480	341	139
1949	8,509	7,392	4,060	3,398	662	418	272	146
1948	10,273	7,476	4,316	3,289	1,027	441	266	175
1947	9,340	6,536	3,807	3,197	610	338	203	135
1946	7,092	6,539	3,969	2,967	1,002	502	293	209
1945	6,596	6,461	3,708	2,912	796	410	261	149
1944	6,594	6,449	3,974	3,236	738	344	206	138
1943	5,948	5,801	3,424	2,607	817	287	177	110
1942	5,781	5,325	2,957	1,983	974	212	110	102
1941	8,982	7,562	4,696	3,484	1,212	296	128	168
1940	12,257	6,141	3,964	3,048	916	298	145	153
1939	10,726	5,561	3,902	2,943	959	273	163	110
1938	7,873	5,031	3,547	2,807	740	218	137	81
1937	8,610	6,252	4,447	3,411	1,036	289	161	128
1936	7,523	5,872	4,123	3,098	1,025	290	141	149
1935	7,692	5,305	3,970	3,043	927	266	124	142
1934	5,995	4,286	3,056	2,438	618	200	113	87
1933	4,915	4,447	3,237	2,457	780	232	127	105
1932	4,577	3,905	2,962	2,291	671	211	124	87
1931	5,445	4,940	3,476	2,631	845	277	161	116
1930	5,523	5,327	3,736	2,815	921	261	161	100
1929	6,811	6,364	4,318	2,985	1,333	335	192	143
1928	6,023	5,731	3,857	2,658	1,199	298	166	132
1927	5,786	5,525	3,836	2,697	1,139	247	159	88
1926	5,821	5,593	3,811	2,800	1,011	218	137	81
1925	5,529	5,233	3,601	2,641	960	211	130	81
1924	5,506	4,957	3,246	2,439	807	265	165	100
1923	5,729	5,209	3,465	2,492	973	243	149	94
1922	5,490	4,985	3,320	2,368	952	206	152	54
1921	5,463	4,146	2,891	2,044	847	204	156	48
1920	5,559	4,698	3,155	2,169	986	222	163	59
1919	4,703	4,581	3,277	2,099	1,178	237	183	54
1918	4,313	4,177	2,937	1,777	1,160	193	149	44
1917	6,249	4,171	2,933	1,978	955	228	163	65
1916	4,313	3,930	2,767	1,797	970	240	170	70
1915	3,858	3,739	2,785	1,672	1,113	246	168	78
1914	3,868	3,778	2,885	1,686	1,199	223	182	41
1913	3,538	3,409	2,412	1,634	778	215	165	50
1912	3,288	3,195	2,243	1,577	666	194	138	56
1911	3,051	2,909	2,013	1,512	501	208	141	67
1910	2,961	2,868	1,964	1,429	535	210	138	72
1909	3,106	3,016	2,197	1,552	645	183	124	59
1908	2,522	2,297	1,646	1,251	395	151	110	41
1907	2,626	2,495	1,783	1,375	408	161	106	55
1906	2,664	2,528	1,786	1,370	416	171	106	65
1905	2,518	2,438	1,795	1,279	516	170	108	62
1904	2,396	2,277	1,699	1,297	402	159	97	62
1903	2,310	2,236	1,599	1,243	356	150	92	58
1902	2,374	2,285	1,643	1,279	364	159	83	76
1901	2,201	2,107	1,433	1,119	314	146	83	63
1900	2,001	1,968	1,414	1,001	413	127	75	52

TABLE A2. **Imports of Raw Materials Into the United States in Constant 1972 Dollars, by Broad Product Groups: 1900 to 1977**—Continued

(Millions of dollars)

Year	Forest products				Minerals							
								Other metals				
	Total	Sawlogs	Pulpwood	Other forest products	Total	Total, except gold	Iron and ferro-alloy metals	Total	Total, except gold	Mineral fuels	Construction materials	Other nonmetallic minerals
1977	1,453	967	362	124	15,381	15,156	1,586	2,085	1,860	10,891	152	667
1976	1,209	741	344	124	13,474	13,339	1,520	2,090	1,955	9,155	134	575
1975	929	536	289	104	11,158	11,023	1,385	1,588	1,453	7,560	126	499
1974	1,149	654	384	111	12,147	12,013	1,666	2,031	1,897	7,698	173	579
1973	1,385	851	386	148	11,952	11,757	1,519	1,891	1,696	7,844	172	526
1972	1,369	839	362	168	9,856	9,546	1,410	1,792	1,482	6,019	159	476
1971	1,164	684	348	132	8,609	8,244	1,346	1,699	1,334	4,993	139	432
1970	1,028	583	339	106	7,938	7,601	1,332	1,685	1,348	4,357	136	428
1969	1,060	592	355	113	7,546	7,250	1,240	1,626	1,330	4,113	139	428
1968	1,018	580	334	104	7,574	7,273	1,372	1,963	1,662	3,685	141	413
1967	983	585	329	69	6,866	6,396	1,242	1,913	1,443	3,221	119	371
1966	905	491	342	72	6,440	6,379	1,326	1,364	1,303	3,244	134	372
1965	865	491	311	63	6,082	5,935	1,357	1,159	1,012	3,110	141	315
1964	845	491	297	57	5,485	5,425	1,125	1,066	1,006	2,867	145	282
1963	835	503	281	51	5,071	5,006	956	1,048	983	2,686	131	250
1962	792	464	280	48	5,167	4,949	927	1,233	1,015	2,635	130	242
1961	711	408	265	38	4,604	4,523	837	1,021	940	2,398	113	235
1960	674	375	261	38	4,991	4,519	867	1,527	1,055	2,266	117	214
1959	694	390	257	47	5,198	4,768	977	1,652	1,222	2,221	122	226
1958	593	324	237	32	4,943	4,532	747	1,794	1,383	2,122	105	175
1957	572	289	254	29	5,248	4,857	1,006	1,975	1,584	1,947	111	209
1956	638	333	276	29	4,679	4,490	974	1,616	1,427	1,778	110	201
1955	638	354	258	26	4,139	3,991	886	1,428	1,280	1,541	108	176
1954	570	306	244	20	3,641	3,586	768	1,332	1,277	1,298	98	145
1953	538	280	248	10	3,714	3,646	751	1,432	1,364	1,278	100	153
1952	504	247	250	7	4,444	3,375	615	2,402	1,333	1,183	99	145
1951	532	253	272	7	2,925	2,807	573	1,047	929	1,045	106	154
1950	597	345	248	4	3,325	3,090	537	1,490	1,255	1,054	99	145
1949	388	159	226	3	3,643	2,526	447	2,213	1,096	814	70	99
1948	441	188	250	3	5,075	2,278	484	3,748	951	644	86	113
1947	370	131	238	1	4,825	2,021	389	3,722	918	556	79	79
1946	331	125	205	1	2,290	1,737	351	1,306	753	492	57	84
1945	282	106	175	1	2,196	2,061	373	1,229	1,094	453	43	98
1944	242	98	143	1	2,034	1,889	417	1,125	980	351	43	98
1943	244	86	157	1	1,993	1,846	448	1,139	992	233	50	123
1942	328	153	174	1	2,284	1,828	424	1,568	1,112	143	48	101
1941	313	135	174	4	3,677	2,257	432	2,766	1,346	345	52	82
1940	229	73	152	4	7,766	1,650	336	7,036	920	291	35	68
1939	246	71	172	3	6,305	1,140	219	5,776	611	218	35	57
1938	209	53	154	2	3,899	1,057	141	3,490	648	192	26	50
1937	283	69	213	1	3,591	1,233	242	3,021	663	209	40	79
1936	257	67	189	1	2,853	1,202	212	2,340	689	210	32	59
1935	207	43	163	1	3,249	862	143	2,838	451	198	20	50
1934	178	31	146	1	2,561	852	101	2,225	516	182	14	39
1933	175	37	137	1	1,271	803	90	969	501	163	14	35
1932	162	39	121	2	1,242	570	46	899	227	263	10	24
1931	211	76	134	1	1,481	976	91	1,027	522	303	20	40
1930	280	122	157	1	1,246	1,050	153	630	434	371	37	55
1929	318	153	164	1	1,840	1,393	207	1,143	696	381	43	66
1928	303	147	155	1	1,565	1,273	154	1,002	710	312	40	57
1927	320	174	144	2	1,383	1,122	130	908	647	254	40	51
1926	335	190	143	2	1,457	1,229	141	920	692	295	41	60
1925	313	186	125	2	1,404	1,108	126	912	616	279	37	50
1924	294	174	118	2	1,701	1,152	99	1,188	639	328	32	54
1923	316	198	116	2	1,705	1,185	110	1,153	633	358	33	51
1922	257	155	100	2	1,707	1,202	71	1,068	563	505	23	40
1921	152	86	65	1	2,216	899	35	1,701	384	443	12	25
1920	213	135	76	2	1,969	1,108	117	1,405	544	378	23	46
1919	175	114	59	2	1,014	892	103	664	542	192	19	36
1918	175	122	52	1	1,008	872	147	677	541	143	17	24
1917	175	122	52	1	2,913	835	140	2,601	523	119	18	35
1916	175	122	52	1	1,131	748	136	856	473	85	15	39
1915	155	106	48	1	672	553	100	447	328	80	11	34
1914	141	92	48	1	619	529	84	411	321	68	14	42
1913	141	96	44	1	770	641	118	526	397	57	18	51
1912	147	104	42	1	704	611	101	501	408	36	16	50
1911	126	86	39	1	704	562	78	543	401	20	15	48
1910	132	94	37	1	655	562	94	476	383	21	15	49
1909	128	98	30	(Z)	598	508	68	460	370	15	13	42
1908	100	78	22	(Z)	625	400	45	525	300	16	11	28
1907	120	90	30	(Z)	562	431	62	423	292	21	16	40
1906	122	100	22	(Z)	585	449	78	433	297	17	11	46
1905	99	80	19	(Z)	454	374	51	339	259	19	10	35
1904	80	61	19	(Z)	458	339	38	361	242	17	9	33
1903	79	63	16	(Z)	482	408	88	311	237	36	9	38
1902	89	73	16	(Z)	483	394	89	320	231	27	8	39
1901	73	59	14	(Z)	549	455	163	323	229	19	8	36
1900	64	53	11	(Z)	396	363	94	243	210	19	7	33

TABLE A3. Exports of Raw Materials From the United States in Constant 1972 Dollars, by Broad Product Groups: 1900 to 1977

(Millions of dollars)

Year	All raw materials		Agricultural materials			Fishery and wildlife products		
	Total	Total, except gold	Total	Crops	Livestock	Total	Fishery products	Wildlife products
1977	13,858	13,503	10,299	9,135	1,164	212	117	95
1976	13,621	13,475	10,173	9,025	1,148	193	92	101
1975	12,735	12,599	9,285	8,306	979	175	94	81
1974	12,694	12,665	9,247	8,277	970	166	76	90
1973	13,372	13,342	10,008	9,027	981	196	111	85
1972	10,783	10,744	7,811	6,822	989	172	94	78
1971	9,591	9,526	6,797	5,767	1,030	154	84	70
1970	10,062	10,008	6,654	5,766	888	147	74	73
1969	8,693	8,676	5,653	4,817	836	146	70	76
1968	10,169	8,957	6,102	5,244	858	104	39	65
1967	10,084	8,630	6,023	5,221	802	105	50	55
1966	9,464	8,803	6,420	5,624	796	97	53	44
1965	10,201	8,342	6,075	5,112	963	90	43	47
1964	9,793	9,182	6,658	5,300	1,358	78	41	37
1963	8,255	7,962	5,758	4,650	1,108	73	35	38
1962	7,485	6,933	5,128	4,335	793	54	22	32
1961	8,412	7,291	5,135	4,375	760	58	21	37
1960	7,286	7,283	5,106	4,391	715	59	28	31
1959	5,708	5,705	4,130	3,423	707	56	29	27
1958	5,748	5,703	3,876	3,221	655	44	20	24
1957	7,582	7,340	4,605	3,842	763	54	23	31
1956	6,552	6,514	4,162	3,273	889	50	27	23
1955	5,189	5,180	3,187	2,366	821	50	29	21
1954	4,674	4,649	2,924	2,360	564	44	23	21
1953	4,179	4,135	2,606	2,108	498	40	20	20
1952	4,679	4,640	2,917	2,515	402	34	16	18
1951	6,128	5,241	3,422	2,883	539	43	25	18
1950	4,914	4,173	2,836	2,343	493	38	21	17
1949	4,254	4,144	2,748	2,334	414	46	29	17
1948	4,112	3,848	2,218	1,876	342	36	19	17
1947	5,387	5,121	2,897	2,283	614	70	44	26
1946	5,175	4,857	3,271	2,166	1,105	62	42	20
1945	4,507	4,221	2,566	1,527	1,039	57	45	12
1944	5,892	4,505	2,422	917	1,505	47	44	3
1943	4,394	4,359	2,545	1,009	1,536	62	59	3
1942	3,094	3,094	1,636	676	960	46	41	5
1941	2,544	2,544	1,251	787	464	37	32	5
1940	2,962	2,961	1,302	1,117	185	49	29	20
1939	3,362	3,361	1,687	1,506	181	41	23	18
1938	3,487	3,478	1,904	1,751	153	44	23	21
1937	3,368	3,301	1,680	1,556	124	36	21	15
1936	2,762	2,723	1,495	1,371	124	39	21	18
1935	2,848	2,845	1,582	1,447	135	44	23	21
1934	2,959	2,879	1,690	1,463	227	41	23	18
1933	3,967	3,120	2,117	1,890	227	36	16	20
1932	4,990	3,242	2,322	2,111	211	32	15	17
1931	4,390	3,443	2,192	1,937	255	40	20	20
1930	4,124	3,940	2,270	1,954	316	48	25	23
1929	4,904	4,637	2,659	2,280	379	50	32	18
1928	5,864	4,843	2,864	2,502	362	47	27	20
1927	5,053	4,918	3,062	2,702	360	40	23	17
1926	4,771	4,748	2,854	2,454	400	37	25	12
1925	4,757	4,497	2,814	2,339	475	41	26	15
1924	4,717	4,650	2,885	2,290	595	51	34	17
1923	4,100	4,051	2,537	1,832	705	42	28	14
1922	4,153	4,138	2,959	2,372	587	45	31	14
1921	4,528	4,519	3,410	2,722	688	36	27	9
1920	4,598	4,502	3,065	2,317	748	60	43	17
1919	5,533	5,235	3,880	2,522	1,358	82	71	11
1918	4,693	4,673	3,177	1,689	1,488	60	52	8
1917	4,419	4,163	2,471	1,571	900	60	42	18
1916	4,766	4,727	3,262	2,323	939	73	47	26
1915	4,940	4,894	3,673	2,718	955	60	46	14
1914	3,802	3,695	2,433	2,075	358	55	29	26
1913	4,228	4,123	2,620	2,264	356	68	33	35
1912	4,218	4,150	2,791	2,430	361	55	23	32
1911	3,763	3,760	2,447	2,013	434	46	20	26
1910	3,154	3,084	1,952	1,632	320	55	21	34
1909	3,382	3,325	2,260	1,811	449	52	23	29
1908	3,810	3,707	2,708	2,099	609	36	18	18
1907	3,872	3,811	2,846	2,141	705	35	18	17
1906	4,043	4,026	2,853	1,994	859	40	19	21
1905	3,715	3,637	2,755	1,895	860	41	20	21
1904	3,399	3,242	2,330	1,550	780	43	23	20
1903	3,595	3,530	2,767	2,006	761	41	17	24
1902	3,570	3,476	2,733	2,006	727	45	22	23
1901	4,308	4,199	3,449	2,332	1,117	37	19	18
1900	3,927	3,927	3,135	2,180	955	41	18	23

TABLE A3. Exports of Raw Materials From the United States in Constant 1972 Dollars, by Broad Product Groups: 1900 to 1977—Continued

(Millions of dollars)

Year	Forest products				Minerals							
								Other metals				
	Total	Sawlegs	Pulpwood	Other forest products	Total	Total, except gold	Iron and ferro-alloy metals	Total	Total, except gold	Mineral fuels	Construc-tion materials	Other non-metallic minerals
1977	667	440	187	40	2,680	2,325	525	936	581	826	37	356
1976	709	467	184	58	2,546	2,400	637	727	581	828	38	316
1975	626	393	176	57	2,649	2,513	619	821	685	849	37	323
1974	671	405	211	55	2,610	2,581	676	719	690	820	33	362
1973	712	476	167	69	2,456	2,426	626	712	682	778	28	312
1972	656	422	166	68	2,144	2,105	448	604	565	779	25	288
1971	532	312	164	56	2,108	2,043	458	588	523	786	24	252
1970	633	375	191	67	2,628	2,574	716	679	625	962	22	249
1969	558	330	151	77	2,336	2,319	637	610	593	809	23	257
1968	558	348	139	71	3,405	2,193	442	1,935	723	754	20	254
1967	488	289	122	77	3,468	2,014	440	1,953	499	827	25	223
1966	407	226	111	70	2,540	1,879	413	1,206	545	687	19	215
1965	358	199	101	58	3,678	1,819	406	2,388	529	675	17	192
1964	350	190	105	55	2,707	2,096	560	1,252	641	690	15	190
1963	320	170	90	60	2,104	1,811	484	751	458	701	11	157
1962	256	122	78	56	2,047	1,495	349	986	434	563	7	142
1961	251	116	78	57	2,968	1,847	535	1,746	625	541	10	136
1960	246	107	73	66	1,875	1,872	492	646	643	588	12	137
1959	227	92	52	83	1,295	1,292	284	286	283	603	6	116
1958	184	86	44	54	1,644	1,599	263	476	431	797	5	103
1957	198	92	49	57	2,725	2,483	460	759	517	1,387	7	112
1956	197	89	42	66	2,143	2,105	459	407	369	1,162	7	108
1955	197	92	46	59	1,755	1,746	365	368	359	922	8	92
1954	188	80	36	72	1,518	1,493	248	438	413	744	5	83
1953	146	71	19	56	1,387	1,343	211	286	242	818	6	66
1952	136	74	23	39	1,592	1,553	223	312	273	989	7	61
1951	187	101	24	62	2,476	1,589	188	1,131	244	1,079	6	72
1950	170	54	13	103	1,870	1,129	160	983	242	657	5	65
1949	134	57	14	63	1,326	1,216	210	377	267	672	5	62
1948	125	54	15	56	1,733	1,469	222	553	289	894	6	58
1947	202	115	19	68	2,218	1,952	363	596	330	1,194	7	58
1946	123	54	13	56	1,719	1,401	194	544	226	925	6	50
1945	84	37	18	29	1,800	1,514	196	670	384	887	5	42
1944	80	31	18	31	3,343	1,956	248	2,101	714	955	3	36
1943	102	26	21	55	1,685	1,650	274	612	577	762	3	34
1942	99	38	26	35	1,313	1,313	271	376	376	632	4	30
1941	150	59	27	64	1,106	1,106	241	257	257	567	4	37
1940	165	82	33	50	1,446	1,445	317	490	489	601	4	34
1939	196	94	13	89	1,438	1,437	204	423	422	773	3	35
1938	170	84	12	74	1,369	1,360	178	389	380	765	2	35
1937	240	124	19	97	1,412	1,345	252	401	334	720	2	37
1936	224	110	13	101	1,004	965	123	287	248	559	2	33
1935	229	111	13	105	993	990	140	281	278	541	1	30
1934	216	115	11	90	1,012	932	95	389	309	499	1	28
1933	222	110	6	106	1,592	745	44	1,066	219	456	(Z)	26
1932	199	98	6	95	2,437	689	24	1,954	206	441	(Z)	18
1931	250	145	7	98	1,908	961	42	1,299	352	541	1	25
1930	318	200	9	109	1,488	1,304	75	699	515	682	2	30
1929	403	272	9	122	1,792	1,525	114	906	639	734	2	36
1928	395	275	7	113	2,558	1,537	104	1,731	710	694	3	26
1927	375	263	6	106	1,576	1,441	77	818	683	657	2	27
1926	349	240	6	103	1,531	1,508	68	671	648	768	2	22
1925	325	223	5	97	1,577	1,317	54	939	679	559	2	23
1924	364	235	5	124	1,417	1,350	54	766	699	576	2	19
1923	317	211	5	101	1,204	1,155	59	549	500	573	3	20
1922	252	167	5	80	897	882	58	440	425	377	5	17
1921	181	113	5	63	901	892	57	354	345	471	5	14
1920	204	145	11	48	1,269	1,173	121	486	390	633	8	21
1919	205	127	12	66	1,366	1,068	110	808	510	431	6	11
1918	143	94	7	42	1,313	1,293	144	681	661	473	7	8
1917	167	99	7	61	1,721	1,465	170	1,046	790	491	6	8
1916	197	110	5	82	1,234	1,195	171	602	563	451	3	7
1915	190	111	2	77	1,017	971	109	502	456	398	3	5
1914	254	178	2	74	1,060	953	64	612	505	365	8	11
1913	392	258	2	132	1,148	1,043	98	626	521	399	12	13
1912	380	249	2	129	992	924	97	533	465	343	6	13
1911	361	232	2	127	909	906	76	488	485	326	6	13
1910	312	200	1	111	835	765	54	499	429	270	3	9
1909	276	169	2	105	794	737	42	477	420	264	2	9
1908	270	155	1	114	796	693	34	497	394	253	2	10
1907	332	193	2	137	659	598	39	363	302	246	2	9
1906	310	178	2	130	840	823	40	331	314	457	5	7
1905	268	153	1	114	651	573	34	405	327	200	5	7
1904	298	167	2	129	728	571	34	505	348	175	7	7
1903	282	162	1	119	505	440	10	313	248	165	11	6
1902	252	124	1	127	540	446	11	365	271	150	8	6
1901	275	131	2	142	547	438	23	336	227	167	15	6
1900	263	143	1	119	488	488	33	275	275	162	13	5

TABLE A4. Consumption of Raw Materials in the United States in Constant 1972 Dollars, by Broad Product Groups: 1900 to 1977

(Millions of dollars)

Year	All raw materials, total	Agricultural materials			Fishery and wildlife products			Direct energy
		Total	Crops	Livestock	Total	Fishery products	Wildlife products	
1977	98,391	48,340	15,506	32,834	1,887	1,804	83	828
1976	97,171	48,712	15,899	32,813	1,899	1,843	56	1,072
1975	90,472	46,521	15,500	31,021	1,631	1,557	74	1,132
1974	94,185	46,505	15,052	31,453	1,668	1,610	58	1,133
1973	95,097	45,744	15,669	30,075	1,705	1,645	60	1,025
1972	94,552	47,089	15,292	31,797	1,993	1,923	70	1,025
1971	91,682	46,958	15,080	31,878	1,782	1,684	98	998
1970	89,279	45,885	14,720	31,165	1,869	1,741	128	928
1969	89,153	45,800	15,143	30,657	1,805	1,676	129	938
1968	87,824	45,585	14,790	30,795	2,066	1,927	139	836
1967	84,691	44,471	14,444	30,027	1,845	1,685	160	833
1966	84,123	43,571	14,322	29,249	1,962	1,791	171	733
1965	81,118	42,822	14,095	28,727	1,826	1,663	163	730
1964	79,502	43,144	13,857	29,287	1,719	1,557	162	667
1963	76,419	41,925	13,608	28,317	1,640	1,469	171	626
1962	74,723	41,175	13,639	27,536	1,687	1,520	167	638
1961	72,136	40,485	13,474	27,011	1,505	1,341	164	577
1960	71,284	39,963	13,475	26,488	1,437	1,274	163	553
1959	71,670	39,947	13,581	26,366	1,430	1,264	166	524
1958	68,535	38,511	13,228	25,283	1,450	1,275	175	532
1957	68,914	38,690	13,036	25,654	1,377	1,198	179	494
1956	70,295	39,423	13,291	26,132	1,409	1,239	170	464
1955	68,312	38,402	13,087	25,315	1,339	1,164	175	430
1954	64,467	36,833	12,812	24,021	1,370	1,204	166	413
1953	65,201	36,951	13,128	23,823	1,372	1,187	185	406
1952	63,550	36,125	13,148	22,977	1,370	1,186	184	406
1951	62,945	35,677	13,325	22,352	1,298	1,097	201	387
1950	62,239	35,740	13,273	22,467	1,339	1,156	183	374
1949	57,925	34,407	12,730	21,677	1,356	1,150	206	351
1948	60,203	35,040	13,355	21,685	1,475	1,228	247	322
1947	59,757	35,769	13,344	22,425	1,295	1,095	200	308
1946	58,873	36,076	13,709	22,367	1,750	1,460	290	308
1945	58,901	36,066	13,602	22,464	1,676	1,460	216	314
1944	59,915	36,916	13,800	23,116	1,420	1,208	212	293
1943	57,437	34,694	12,831	21,863	1,348	1,164	184	294
1942	56,083	33,751	13,224	20,527	1,184	1,020	164	257
1941	54,761	32,842	13,389	19,453	1,174	938	236	206
1940	49,813	31,178	12,335	18,843	1,081	870	211	193
1939	47,130	30,155	12,204	17,951	1,031	878	153	178
1938	43,445	28,557	11,472	17,085	938	811	127	181
1937	46,603	29,338	12,291	17,047	993	813	180	180
1936	45,445	28,968	11,684	17,284	967	777	190	160
1935	41,783	27,774	11,745	16,029	829	661	168	159
1934	41,296	28,451	10,737	17,714	757	645	112	136
1933	40,041	27,783	10,536	17,247	750	623	127	139
1932	38,133	26,907	10,147	16,760	721	584	137	136
1931	41,509	27,758	10,881	16,877	872	710	162	123
1930	43,630	27,538	10,937	16,601	975	815	160	133
1929	46,864	28,204	11,385	16,819	1,029	856	173	141
1928	45,115	27,585	11,083	16,502	936	782	154	142
1927	44,923	27,650	11,071	16,579	892	771	121	126
1926	45,669	27,914	11,363	16,551	810	697	113	116
1925	44,613	27,524	11,171	16,353	736	628	108	100
1924	43,915	27,302	10,828	16,474	783	666	117	94
1923	44,612	27,379	11,185	16,194	697	581	116	92
1922	40,777	26,160	10,703	15,457	706	614	92	84
1921	36,333	23,284	8,921	14,363	674	597	77	74
1920	41,960	26,209	11,612	14,597	739	663	76	80
1919	40,602	25,812	10,653	15,159	740	669	71	67
1918	41,560	26,249	11,468	14,781	736	665	71	62
1917	41,321	25,653	11,261	14,392	777	695	82	57
1916	39,642	23,999	9,644	14,355	764	688	76	50
1915	38,248	24,295	10,191	14,104	759	665	94	43
1914	39,433	25,704	11,432	14,272	768	685	83	37
1913	38,913	24,213	10,055	14,158	724	636	88	36
1912	38,775	24,352	10,307	14,045	682	592	90	33
1911	37,870	24,100	10,065	14,035	693	600	93	29
1910	37,360	23,268	9,697	13,571	691	594	97	27
1909	36,784	23,271	9,604	13,667	667	575	92	25
1908	35,151	22,730	9,266	13,464	656	569	87	22
1907	35,522	21,949	8,938	13,011	657	567	90	21
1906	35,347	22,451	9,845	12,606	661	569	92	20
1905	33,772	21,511	8,977	12,534	660	570	90	18
1904	32,988	21,565	9,495	12,070	647	559	88	15
1903	31,631	20,158	8,381	11,777	641	552	89	14
1902	30,404	19,577	8,479	11,098	628	535	93	13
1901	28,997	18,631	7,541	11,090	621	532	89	12
1900	28,417	18,572	7,532	11,040	594	509	85	11

TABLE A4. Consumption of Raw Materials in the United States in Constant 1972 Dollars, by Broad Product Groups: 1900 to 1977—Continued

(Millions of dollars)

Year	Forest products				Minerals					
	Total	Sawlogs	Pulpwood	Other forest products	Total	Iron and ferroalloy metals	Other metals	Mineral fuels	Construction materials	Other nonmetallic minerals
1977	6,428	3,865	1,093	1,470	40,908	2,250	3,203	30,156	3,236	2,063
1976	6,022	3,481	1,124	1,417	39,466	2,052	3,384	29,080	3,049	1,901
1975	5,307	3,029	1,009	1,269	35,881	1,892	2,382	26,961	2,916	1,730
1974	5,850	3,310	1,266	1,274	39,029	2,409	3,297	28,018	3,417	1,888
1973	6,430	3,784	1,197	1,449	40,193	2,453	3,400	28,959	3,547	1,834
1972	6,377	3,752	1,120	1,505	38,068	2,297	3,202	27,651	3,205	1,713
1971	6,184	3,642	1,128	1,414	35,760	2,072	2,922	26,088	3,087	1,591
1970	5,865	3,394	1,164	1,307	34,732	1,934	2,703	25,382	3,130	1,583
1969	6,058	3,555	1,154	1,349	34,552	2,101	2,903	24,749	3,157	1,642
1968	6,108	3,582	1,092	1,434	33,229	2,190	2,860	23,569	3,066	1,544
1967	5,910	3,485	1,052	1,373	31,632	2,061	2,925	22,172	2,949	1,525
1966	6,130	3,624	1,076	1,430	31,727	2,405	3,259	21,495	3,070	1,498
1965	6,132	3,666	1,030	1,436	29,608	2,210	2,583	20,451	3,016	1,348
1964	6,007	3,654	951	1,402	27,965	1,808	2,458	19,618	2,864	1,217
1963	5,760	3,519	899	1,342	26,468	1,541	2,173	18,964	2,701	1,089
1962	5,553	3,388	882	1,283	25,670	1,518	2,264	18,205	2,617	1,066
1961	5,362	3,234	843	1,285	24,207	1,329	2,015	17,411	2,465	987
1960	5,427	3,291	870	1,266	23,904	1,387	1,883	17,242	2,419	973
1959	5,842	3,716	829	1,297	23,927	1,429	2,256	16,841	2,408	993
1958	5,350	3,308	767	1,275	22,692	1,292	2,147	16,151	2,241	861
1957	5,330	3,231	828	1,271	23,023	1,601	2,190	16,131	2,184	917
1956	5,987	3,766	890	1,331	23,012	1,653	2,174	16,115	2,145	925
1955	5,857	3,704	795	1,358	22,284	1,804	2,053	15,536	2,015	876
1954	5,619	3,579	727	1,313	20,232	1,498	1,860	14,258	1,814	802
1953	5,671	3,606	735	1,330	20,801	1,782	2,208	14,398	1,613	800
1952	5,699	3,636	707	1,356	19,950	1,394	2,213	14,013	1,588	742
1951	5,739	3,591	732	1,416	19,844	1,632	1,873	14,064	1,534	741
1950	5,824	3,804	633	1,387	18,962	1,531	2,168	13,190	1,396	677
1949	5,148	3,082	555	1,511	16,663	1,182	1,692	12,015	1,211	563
1948	5,725	3,562	631	1,532	17,641	1,253	1,648	12,872	1,259	609
1947	5,442	3,296	586	1,560	16,943	1,042	1,666	12,531	1,139	565
1946	5,253	3,227	530	1,496	15,486	925	1,612	11,432	994	523
1945	4,668	2,673	461	1,534	16,177	1,184	1,882	11,820	775	516
1944	5,105	3,117	436	1,552	16,181	1,381	1,748	11,768	761	523
1943	5,175	3,235	411	1,529	15,926	1,396	1,914	11,190	878	548
1942	5,582	3,477	450	1,655	15,309	1,344	2,029	10,384	1,068	484
1941	5,696	3,459	434	1,803	14,843	1,293	2,077	9,990	1,062	421
1940	5,077	2,876	370	1,831	12,284	880	1,119	9,076	882	327
1939	4,854	2,639	357	1,858	10,912	589	924	8,253	863	283
1938	4,469	2,268	303	1,898	9,300	294	569	7,503	704	230
1937	4,877	2,630	375	1,872	11,215	792	942	8,399	778	304
1936	4,691	2,515	330	1,846	10,659	667	885	8,103	742	262
1935	4,173	2,055	284	1,834	8,848	377	571	7,175	508	217
1934	3,802	1,659	257	1,886	8,150	285	336	6,842	499	188
1933	3,674	1,515	253	1,906	7,695	245	457	6,378	441	174
1932	3,292	1,193	215	1,884	7,077	83	266	6,119	484	125
1931	3,852	1,780	249	1,823	8,904	353	684	6,993	675	199
1930	4,778	2,637	272	1,869	10,206	662	661	7,718	922	243
1929	5,614	3,466	287	1,861	11,876	883	1,180	8,486	1,068	259
1928	5,384	3,272	266	1,846	11,068	719	1,083	8,026	1,000	240
1927	5,517	3,360	250	1,907	10,738	710	989	7,816	1,001	222
1926	5,725	3,631	249	1,845	11,104	790	1,087	8,047	949	231
1925	5,852	3,762	222	1,868	10,401	746	1,044	7,470	928	213
1924	5,781	3,596	210	1,975	9,955	590	985	7,336	842	202
1923	6,028	3,786	205	2,037	10,416	787	989	7,611	812	217
1922	5,552	3,255	186	2,111	8,275	538	859	6,077	619	182
1921	5,029	2,658	136	2,235	7,272	256	557	5,832	502	125
1920	5,710	3,231	167	2,312	9,222	724	908	6,831	559	200
1919	5,613	3,182	137	2,294	8,370	581	952	6,175	491	171
1918	5,469	2,978	136	2,355	9,044	787	1,104	6,534	436	183
1917	5,801	3,337	140	2,324	9,033	775	927	6,560	585	186
1916	6,153	3,695	137	2,321	8,676	785	1,043	5,992	694	162
1915	5,819	3,419	130	2,270	7,332	571	813	5,198	618	132
1914	6,085	3,658	120	2,307	6,839	437	543	5,069	662	128
1913	6,308	3,907	115	2,286	7,632	643	659	5,487	696	147
1912	6,434	4,017	111	2,306	7,274	595	611	5,187	678	137
1911	6,290	3,830	106	2,354	6,758	434	677	4,818	716	129
1910	6,470	4,006	100	2,364	6,904	608	629	4,828	707	132
1909	6,456	4,041	93	2,322	6,365	567	611	4,366	701	120
1908	6,193	3,803	75	2,315	5,550	363	478	4,008	606	95
1907	6,579	4,149	91	2,339	6,316	578	496	4,489	637	116
1906	6,397	4,174	79	2,144	5,818	554	605	3,900	636	123
1905	6,101	3,949	70	2,082	5,482	483	502	3,783	610	104
1904	6,005	3,866	68	2,071	4,756	316	436	3,362	551	91
1903	5,881	3,737	62	2,082	4,937	430	452	3,410	553	92
1902	5,772	3,628	57	2,087	4,414	467	470	2,809	575	93
1901	5,598	3,458	51	2,089	4,135	448	376	2,736	484	91
1900	5,472	3,291	46	2,135	3,768	361	367	2,471	485	84

TABLE A5. Consumption of Raw Materials in the United States in Constant 1972 Dollars, by Broad Use Classes: 1900 to 1977

(Millions of dollars)

Year	All raw materials total	Food		Physical-structure materials							
				Total		Agricultural and fishery nonfoods and wildlife products		Forest products		Minerals	
		Dollars	Percent of all raw materials	Dollars	Percent of all raw materials	Dollars	Percent of all physical-structure materials	Dollars	Percent of all physical-structure materials	Dollars	Percent of all physical-structure materials
1977	98,391	45,856	46.6	23,046	23.4	4,230	18.4	6,179	26.8	12,637	54.8
1976	97,171	46,148	47.5	22,273	22.9	4,322	19.4	5,787	26.0	12,164	54.6
1975	90,472	43,899	48.5	19,758	21.8	4,112	20.8	5,085	25.7	10,561	53.5
1974	94,185	44,008	46.7	22,567	24.0	4,024	17.8	5,643	25.0	12,900	57.2
1973	95,097	42,836	45.0	23,904	25.1	4,472	18.7	6,234	26.1	13,198	55.2
1972	94,552	44,503	47.1	22,861	24.2	4,430	19.4	6,191	27.1	12,240	53.5
1971	91,682	43,968	48.0	21,953	23.9	4,607	21.0	5,988	27.3	11,358	51.7
1970	89,279	42,984	48.1	21,246	23.8	4,596	21.6	5,652	26.6	10,998	51.8
1969	89,153	42,507	47.7	22,090	24.8	4,911	22.2	5,819	26.3	11,360	51.4
1968	87,824	42,155	48.0	22,297	25.4	5,309	23.8	5,845	26.2	11,143	50.0
1967	84,691	40,946	48.3	21,649	25.6	5,177	23.9	5,626	26.0	10,846	50.1
1966	84,123	39,915	47.4	22,902	27.2	5,419	23.7	5,826	25.4	11,657	50.9
1965	81,118	39,223	48.4	21,501	26.5	5,217	24.3	5,810	27.0	10,474	48.7
1964	79,502	39,464	49.6	20,452	25.7	5,185	25.4	5,668	27.7	9,599	46.9
1963	76,419	38,466	50.3	18,872	24.7	4,879	25.9	5,404	28.6	8,589	45.5
1962	74,723	37,478	50.2	18,759	25.1	5,157	27.5	5,181	27.6	8,421	44.9
1961	72,136	36,840	51.1	17,559	24.3	4,915	28.0	4,958	28.2	7,686	43.8
1960	71,284	35,971	50.5	17,671	24.8	5,148	29.1	4,994	28.3	7,529	42.6
1959	71,670	35,654	49.7	18,657	26.0	5,396	28.9	5,377	28.8	7,884	42.3
1958	68,535	34,489	50.3	17,213	25.1	5,109	29.7	4,855	28.2	7,249	42.1
1957	68,914	34,703	50.4	17,369	25.2	4,970	28.6	4,804	27.7	7,595	43.7
1956	70,295	35,032	49.8	18,424	26.2	5,380	29.2	5,430	29.5	7,614	41.3
1955	68,312	33,867	49.6	18,126	26.5	5,433	30.0	5,268	29.1	7,425	41.0
1954	64,467	32,612	50.6	16,668	25.9	5,106	30.6	4,999	30.0	6,563	39.4
1953	65,201	32,271	49.5	17,511	26.9	5,490	31.4	5,019	28.7	7,002	40.0
1952	63,550	31,418	49.4	16,975	26.7	5,441	32.1	5,016	29.5	6,518	38.4
1951	62,945	30,754	48.9	16,857	26.8	5,474	32.5	5,017	29.8	6,366	37.8
1950	62,239	30,563	49.1	17,125	27.5	5,744	33.5	5,090	29.7	6,291	36.7
1949	57,925	29,761	51.4	14,526	25.1	5,108	35.2	4,315	29.7	5,103	35.1
1948	60,203	29,589	49.1	16,129	26.8	5,971	37.0	4,908	30.4	5,250	32.6
1947	59,757	30,633	51.3	14,897	24.9	5,396	36.2	4,627	31.1	4,874	32.7
1946	58,873	30,847	52.4	14,781	25.1	5,850	39.6	4,445	30.1	4,486	30.3
1945	58,901	31,101	52.8	13,993	23.8	5,423	38.8	3,816	27.3	4,754	34.0
1944	59,915	31,234	52.1	14,757	24.6	5,732	38.8	4,245	28.8	4,780	32.4
1943	57,437	29,221	50.9	14,859	25.9	5,445	36.6	4,339	29.2	5,075	34.2
1942	56,083	27,845	49.6	15,657	27.9	5,673	36.2	4,715	30.1	5,269	33.7
1941	54,761	26,613	48.6	15,845	28.9	5,984	37.8	4,656	29.4	5,205	32.8
1940	49,813	25,721	51.6	12,539	25.2	5,050	40.3	3,991	31.8	3,498	27.9
1939	47,130	24,994	53.0	11,317	24.0	4,674	41.3	3,713	32.8	2,930	25.9
1938	43,445	23,677	54.5	9,547	22.0	4,199	44.0	3,312	34.7	2,036	21.3
1937	46,603	23,493	50.4	11,958	25.7	5,129	42.9	3,760	31.4	3,069	25.7
1936	45,445	23,700	52.2	10,789	23.7	4,460	41.3	3,537	32.8	2,792	25.9
1935	41,783	22,462	53.8	9,199	22.0	4,349	47.3	2,985	32.4	1,865	20.3
1934	41,296	23,806	57.6	7,722	18.7	3,676	47.6	2,556	33.1	1,490	19.3
1933	40,041	23,004	57.5	7,665	19.1	3,794	49.5	2,394	31.2	1,477	19.3
1932	38,133	22,423	58.8	6,645	17.4	3,492	52.6	2,036	30.6	1,117	16.8
1931	41,509	22,854	55.1	8,861	21.3	4,060	45.8	2,705	30.5	2,096	23.7
1930	43,630	22,769	52.2	10,438	23.9	4,001	38.3	3,726	35.7	2,711	26.0
1929	46,864	22,842	48.7	12,762	27.2	4,478	35.1	4,658	36.5	3,626	28.4
1928	45,115	22,306	49.4	11,845	26.3	4,156	35.1	4,427	37.4	3,262	27.5
1927	44,923	22,143	49.3	11,885	26.5	4,189	35.2	4,563	38.4	3,133	26.4
1926	45,669	22,208	48.6	12,197	26.7	4,149	34.0	4,791	39.3	3,257	26.7
1925	44,613	21,691	48.6	12,067	27.0	4,073	33.8	4,875	40.4	3,119	25.8
1924	43,915	21,703	49.4	11,286	25.7	3,720	33.0	4,773	42.3	2,793	24.7
1923	44,612	21,704	48.7	11,590	26.0	3,611	31.2	5,013	43.3	2,966	25.6
1922	40,777	20,702	50.8	10,064	24.7	3,263	32.4	4,475	44.5	2,326	23.1
1921	36,333	18,332	50.5	8,082	22.2	2,691	33.3	3,860	47.8	1,531	18.9
1920	41,960	19,598	46.7	11,296	26.9	4,236	37.5	4,557	40.3	2,503	22.2
1919	40,602	19,223	47.3	10,928	26.9	4,180	38.3	4,457	40.8	2,291	21.0
1918	41,560	18,928	45.5	11,744	28.3	4,877	41.5	4,275	36.4	2,592	22.1
1917	41,321	18,786	45.5	11,654	28.2	4,462	38.3	4,642	39.8	2,550	21.9
1916	39,642	17,521	44.2	11,807	29.8	4,059	34.4	4,991	42.3	2,757	23.4
1915	38,248	18,213	47.6	10,490	27.4	3,623	34.5	4,665	44.5	2,202	21.0
1914	39,433	18,800	47.7	11,313	28.7	4,566	40.4	4,913	43.4	1,834	16.2
1913	38,913	18,091	46.5	11,113	28.6	3,742	33.7	5,163	46.5	2,208	19.9
1912	38,775	18,715	48.3	10,760	27.7	3,328	30.9	5,286	49.1	2,146	19.9
1911	37,870	17,997	47.5	10,917	28.8	3,838	35.2	5,085	46.6	1,994	18.3
1910	37,360	17,622	47.2	10,934	29.3	3,521	32.2	5,285	48.3	2,130	19.5
1909	36,784	17,548	47.7	10,861	29.5	3,524	32.4	5,288	48.7	2,049	18.9
1908	35,151	17,132	48.7	10,056	28.6	3,466	34.5	5,005	49.8	1,585	15.8
1907	35,522	16,551	46.6	10,618	29.9	3,344	31.5	5,404	50.9	1,870	17.6
1906	35,347	16,905	47.8	10,742	30.4	3,574	33.3	5,210	48.5	1,958	18.2
1905	33,772	16,332	48.4	9,903	29.3	3,283	33.2	4,886	49.3	1,734	17.5
1904	32,988	16,516	50.1	9,404	28.5	3,219	34.2	4,761	50.6	1,424	15.1
1903	31,631	15,612	49.4	8,955	28.3	2,787	31.1	4,611	51.5	1,557	17.4
1902	30,404	15,041	49.5	8,953	29.4	2,842	31.7	4,477	50.0	1,634	18.3
1901	28,997	14,290	49.3	8,422	29.0	2,719	32.3	4,277	50.8	1,426	16.8
1900	28,417	14,214	50.0	8,236	29.0	2,786	33.8	4,127	50.1	1,323	16.1

TABLE A5. Consumption of Raw Materials in the United States in Constant 1972 Dollars, by Broad Use Classes: 1900 to 1977—Continued

(Millions of dollars)

Year	Energy materials													
	Total		Direct energy		Coal		Oil and gas		Uranium		Fuelwood		Feed for horses	
	Dollars	Percent of all raw materials	Dollars	Percent of all energy materials	Dollars	Percent of all energy materials	Dollars	Percent of all energy materials	Dollars	Percent of all energy materials	Dollars	Percent of all energy materials	Dollars	Percent of all energy materials
1977	29,489	30.0	828	2.8	5,093	17.3	22,972	77.9	206	0.7	249	0.8	141	0.5
1976	28,750	29.6	1,072	3.7	4,912	17.1	22,255	77.4	135	0.5	235	0.8	141	0.5
1975	26,815	29.6	1,132	4.2	4,401	16.4	20,817	77.6	102	0.4	222	0.8	141	0.5
1974	27,610	29.3	1,133	4.1	4,455	16.1	21,573	78.1	101	0.4	207	0.7	141	0.5
1973	28,357	29.8	1,025	3.6	4,442	15.7	22,450	79.2	103	0.4	196	0.7	141	0.5
1972	27,188	28.8	1,025	3.8	4,127	15.2	21,606	79.5	95	0.3	186	0.7	149	0.5
1971	25,761	28.1	998	3.9	4,023	15.6	20,306	78.8	73	0.3	196	0.8	165	0.6
1970	25,049	28.1	928	3.7	4,183	16.7	19,492	77.8	59	0.2	213	0.9	174	0.7
1969	24,556	27.5	938	3.8	4,149	16.9	18,992	77.3	51	0.2	239	1.0	187	0.8
1968	23,372	26.6	836	3.6	4,085	17.5	17,971	76.9	30	0.1	263	1.1	187	0.8
1967	22,096	26.1	833	3.8	3,932	17.8	16,839	76.2	15	0.1	284	1.3	193	0.9
1966	21,306	25.3	733	3.4	3,979	18.7	16,084	75.5	7	0.0	304	1.4	199	0.9
1965	20,394	25.1	730	3.6	3,779	18.5	15,348	75.3	7	0.0	322	1.6	208	1.0
1964	19,586	24.6	667	3.4	3,607	18.4	14,752	75.3	7	0.0	339	1.7	214	1.1
1963	19,081	25.0	626	3.3	3,428	18.0	14,448	75.7	3	0.0	356	1.9	220	1.2
1962	18,486	24.7	638	3.5	3,221	17.4	14,023	75.9	5	0.0	372	2.0	227	1.2
1961	17,737	24.6	577	3.3	3,114	17.6	13,404	75.6	3	0.0	404	2.3	235	1.3
1960	17,642	24.7	553	3.1	3,217	18.2	13,155	74.6	3	0.0	433	2.5	281	1.6
1959	17,359	24.2	524	3.0	3,178	18.3	12,864	74.1	1	0.0	465	2.7	327	1.9
1958	16,833	24.6	532	3.2	3,101	18.4	12,341	73.3	1	0.0	495	2.9	363	2.2
1957	16,842	24.4	494	2.9	3,492	20.7	11,936	70.9	-	-	526	3.1	394	2.3
1956	16,839	24.0	464	2.8	3,602	21.4	11,796	70.1	-	-	557	3.3	420	2.5
1955	16,319	23.9	430	2.6	3,548	21.7	11,311	69.3	-	-	589	3.6	441	2.7
1954	15,187	23.6	413	2.7	3,249	21.4	10,420	68.6	-	-	620	4.1	485	3.2
1953	15,419	23.6	406	2.6	3,630	23.5	10,169	66.0	-	-	652	4.2	562	3.6
1952	15,157	23.9	406	2.7	3,720	24.5	9,712	64.1	-	-	683	4.5	636	4.2
1951	15,334	24.4	387	2.5	4,163	27.1	9,315	60.7	-	-	722	4.7	747	4.9
1950	14,551	23.4	374	2.6	4,113	28.3	8,558	58.8	-	-	734	5.0	772	5.3
1949	13,638	23.5	351	2.6	3,900	28.6	7,660	56.2	-	-	833	6.1	894	6.6
1948	14,485	24.1	322	2.2	4,813	33.2	7,578	52.3	-	-	817	5.6	955	6.6
1947	14,227	23.8	308	2.2	4,968	34.9	7,101	49.9	-	-	815	5.7	1,035	7.3
1946	13,245	22.5	308	2.3	4,509	34.0	6,491	49.0	-	-	808	6.1	1,129	8.5
1945	13,807	23.4	314	2.3	5,052	36.6	6,371	46.1	-	-	852	6.2	1,218	8.8
1944	13,924	23.2	293	2.1	5,383	38.7	6,018	43.2	-	-	860	6.2	1,370	9.8
1943	13,357	23.3	294	2.2	5,382	40.3	5,469	40.9	-	-	836	6.3	1,376	10.3
1942	12,581	22.4	257	2.0	4,924	39.1	5,116	40.7	-	-	867	6.9	1,417	11.3
1941	12,303	22.5	206	1.7	4,428	36.0	5,210	42.3	-	-	1,040	8.5	1,419	11.5
1940	11,553	23.2	193	1.7	4,051	35.1	4,735	41.0	-	-	1,086	9.4	1,488	12.9
1939	10,819	23.0	178	1.6	3,597	33.2	4,385	40.5	-	-	1,141	10.5	1,518	14.0
1938	10,221	23.5	181	1.8	3,256	31.9	4,008	39.2	-	-	1,157	11.3	1,619	15.8
1937	11,152	23.9	180	1.6	3,977	35.7	4,169	37.4	-	-	1,117	10.0	1,709	15.3
1936	10,956	24.1	160	1.5	3,979	36.3	3,888	35.5	-	-	1,154	10.5	1,775	16.2
1935	10,122	24.2	159	1.6	3,469	34.3	3,514	34.7	-	-	1,188	11.7	1,792	17.7
1934	9,768	23.7	136	1.4	3,395	34.8	3,265	33.4	-	-	1,246	12.8	1,726	
1933	9,372	23.4	139	1.5	3,143	33.5	3,075	32.8	-	-	1,280	13.7	1,735	18.5
1932	9,065	23.8	136	1.5	3,033	33.5	2,927	32.3	-	-	1,256	13.9	1,713	18.9
1931	9,794	23.6	123	1.3	3,624	37.0	3,184	32.5	-	-	1,147	11.7	1,716	17.5
1930	10,423	23.9	133	1.3	4,389	42.1	3,106	29.8	-	-	1,052	10.1	1,743	16.7
1929	11,260	24.0	141	1.3	4,947	43.9	3,303	29.3	-	-	956	8.5	1,913	17.0
1928	10,964	24.3	142	1.3	4,819	44.0	2,987	27.2	-	-	957	8.7	2,059	18.8
1927	10,895	24.3	126	1.2	4,836	44.4	2,769	25.4	-	-	954	8.8	2,210	20.3
1926	11,264	24.7	116	1.0	5,148	45.7	2,699	24.0	-	-	934	8.3	2,367	21.0
1925	10,855	24.3	100	0.9	4,712	43.4	2,570	23.7	-	-	977	9.0	2,496	23.0
1924	10,926	24.9	94	0.9	4,784	43.8	2,378	21.8	-	-	1,008	9.2	2,662	24.4
1923	11,318	25.4	92	0.8	5,142	45.4	2,308	20.4	-	-	1,015	9.0	2,761	24.4
1922	10,011	24.6	84	0.8	4,058	40.5	1,891	18.9	-	-	1,077	10.8	2,901	29.0
1921	9,919	27.3	74	0.7	4,075	41.1	1,666	16.8	-	-	1,169	11.8	2,935	29.6
1920	11,066	26.4	80	0.7	5,054	45.7	1,665	15.0	-	-	1,153	10.4	3,114	28.1
1919	10,451	25.7	67	0.6	4,751	45.5	1,328	12.7	-	-	1,156	11.1	3,149	30.1
1918	10,888	26.2	62	0.6	5,312	48.8	1,140	10.5	-	-	1,194	11.0	3,180	29.2
1917	10,881	26.3	57	0.5	5,294	48.7	1,189	10.9	-	-	1,159	10.7	3,182	29.2
1916	10,314	26.0	50	0.5	4,929	47.8	990	9.6	-	-	1,162	11.3	3,183	30.9
1915	9,545	25.0	43	0.5	4,255	44.6	875	9.2	-	-	1,154	12.1	3,218	33.7
1914	9,320	23.6	37	0.4	4,236	45.5	769	8.3	-	-	1,172	12.6	3,106	33.3
1913	9,709	25.0	36	0.4	4,658	48.0	766	7.9	-	-	1,145	11.8	3,104	32.0
1912	9,300	24.0	33	0.4	4,402	47.3	726	7.8	-	-	1,148	12.3	2,991	32.2
1911	8,956	23.6	29	0.3	4,128	46.1	636	7.1	-	-	1,205	13.5	2,958	33.0
1910	8,804	23.6	27	0.3	4,186	47.5	588	6.7	-	-	1,187	13.5	2,816	32.0
1909	8,375	22.8	25	0.3	3,853	46.0	463	5.5	-	-	1,168	13.9	2,866	34.2
1908	7,963	22.7	22	0.3	3,518	44.2	447	5.6	-	-	1,188	14.9	2,788	35.0
1907	8,353	23.5	21	0.3	4,030	48.2	416	5.0	-	-	1,175	14.1	2,711	32.5
1906	7,700	21.8	20	0.3	3,476	45.1	384	5.0	-	-	1,187	15.4	2,633	34.2
1905	7,537	22.3	18	0.2	3,340	44.3	408	5.4	-	-	1,215	16.1	2,556	33.9
1904	7,068	21.4	15	0.2	3,006	42.5	326	4.6	-	-	1,244	17.6	2,477	35.0
1903	7,064	22.3	14	0.2	3,077	43.6	303	4.3	-	-	1,270	18.0	2,400	34.0
1902	6,410	21.1	13	0.2	2,522	39.3	258	4.0	-	-	1,295	20.2	2,322	36.2
1901	6,285	21.7	12	0.2	2,532	40.3	177	2.8	-	-	1,321	21.0	2,243	35.7
1900	5,967	21.0	11	0.2	2,303	38.6	142	2.4	-	-	1,345	22.5	2,166	36.3

- Represents zero.

TABLE A6. Consumption of Agricultural and Fishery Products in the United States in Constant 1972 Dollars, by Food and Nonfood Use: 1924 to 1977

(Millions of dollars)

Year	All agricultural and fishery products			Crops			Livestock			Fishery products		
	Total	Foods	Nonfoods	Total	Foods	Nonfoods	Total	Foods	Nonfoods	Total	Foods	Nonfoods
1977	50,144	45,856	4,288	15,506	12,024	3,482	32,834	32,115	719	1,804	1,717	87
1976	50,555	46,148	4,407	15,899	12,316	3,583	32,813	32,109	704	1,843	1,723	120
1975	48,078	43,899	4,179	15,500	12,182	3,318	31,021	30,268	753	1,557	1,449	108
1974	48,115	44,008	4,107	15,052	11,699	3,353	31,453	30,784	669	1,610	1,525	85
1973	47,389	42,836	4,553	15,669	11,886	3,783	30,075	29,396	679	1,645	1,554	91
1972	49,012	44,503	4,509	15,292	11,813	3,479	31,797	31,007	790	1,923	1,683	240
1971	48,642	43,968	4,674	15,080	11,407	3,673	31,878	31,060	818	1,684	1,501	183
1970	47,626	42,984	4,642	14,720	11,208	3,512	31,165	30,286	879	1,741	1,490	251
1969	47,476	42,507	4,969	15,143	11,377	3,766	30,657	29,674	983	1,676	1,456	220
1968	47,512	42,155	5,357	14,790	10,965	3,825	30,795	29,720	1,075	1,927	1,470	457
1967	46,156	40,946	5,210	14,444	10,575	3,869	30,027	29,029	998	1,685	1,342	343
1966	45,362	39,915	5,447	14,322	10,268	4,054	29,249	28,180	1,069	1,791	1,467	324
1965	44,485	39,223	5,262	14,095	10,194	3,901	28,727	27,648	1,079	1,663	1,381	282
1964	44,701	39,464	5,237	13,857	9,969	3,888	29,287	28,225	1,062	1,557	1,270	287
1963	43,394	38,466	4,928	13,608	10,029	3,579	28,317	27,186	1,131	1,469	1,251	218
1962	42,695	37,478	5,217	13,639	9,779	3,860	27,536	26,394	1,142	1,520	1,305	215
1961	41,826	36,840	4,986	13,474	9,751	3,723	27,011	25,926	1,085	1,341	1,163	178
1960	41,237	35,971	5,266	13,475	9,466	4,009	26,488	25,377	1,111	1,274	1,128	146
1959	41,211	35,654	5,557	13,581	9,335	4,246	26,366	25,216	1,150	1,264	1,103	161
1958	39,786	34,489	5,297	13,228	9,087	4,141	25,283	24,261	1,022	1,275	1,141	134
1957	39,888	34,703	5,185	13,036	9,034	4,002	25,654	24,607	1,047	1,198	1,062	136
1956	40,662	35,032	5,630	13,291	8,970	4,321	26,132	24,969	1,163	1,239	1,093	146
1955	39,566	33,867	5,699	13,087	8,676	4,411	25,315	24,175	1,140	1,164	1,016	148
1954	38,037	32,612	5,425	12,812	8,519	4,293	24,021	23,029	992	1,204	1,064	140
1953	38,138	32,271	5,867	13,128	8,550	4,578	23,823	22,683	1,140	1,187	1,038	149
1952	37,311	31,418	5,893	13,148	8,560	4,588	22,977	21,835	1,142	1,186	1,023	163
1951	36,774	30,754	6,020	13,325	8,616	4,709	22,352	21,177	1,175	1,097	961	136
1950	36,896	30,563	6,333	13,273	8,471	4,802	22,467	21,062	1,405	1,156	1,030	126
1949	35,557	29,761	5,796	12,730	8,261	4,469	21,677	20,480	1,197	1,150	1,020	130
1948	36,268	29,589	6,679	13,355	8,220	5,135	21,685	20,281	1,404	1,228	1,088	140
1947	36,864	30,633	6,231	13,344	8,571	4,773	22,425	21,072	1,353	1,095	990	105
1946	37,536	30,847	6,689	13,709	8,673	5,036	22,367	20,894	1,473	1,460	1,280	180
1945	37,526	31,101	6,425	13,602	8,709	4,893	22,464	21,064	1,400	1,460	1,328	132
1944	38,124	31,234	6,890	13,800	8,488	5,312	23,116	21,699	1,417	1,208	1,047	161
1943	35,858	29,221	6,637	12,831	7,716	5,115	21,863	20,477	1,386	1,164	1,028	136
1942	34,771	27,845	6,926	13,224	7,836	5,388	20,527	19,077	1,450	1,020	932	88
1941	33,780	26,613	7,167	13,389	7,900	5,489	19,453	17,938	1,515	938	775	163
1940	32,048	25,721	6,327	12,335	7,479	4,856	18,843	17,520	1,323	870	722	148
1939	31,033	24,994	6,039	12,204	7,568	4,636	17,951	16,644	1,307	878	782	96
1938	29,368	23,677	5,691	11,472	7,045	4,427	17,085	15,894	1,191	811	738	73
1937	30,151	23,493	6,658	12,291	7,091	5,200	17,047	15,687	1,360	813	715	98
1936	29,745	23,700	6,045	11,684	7,127	4,557	17,284	15,873	1,411	777	700	77
1935	28,435	22,462	5,973	11,745	7,177	4,568	16,029	14,678	1,351	661	607	54
1934	29,096	23,806	5,290	10,737	6,761	3,976	17,714	16,454	1,260	645	591	54
1933	28,406	23,004	5,402	10,536	6,512	4,024	17,247	15,928	1,319	623	564	59
1932	27,491	22,423	5,068	10,147	6,335	3,812	16,760	15,561	1,199	584	527	57
1931	28,468	22,854	5,614	10,881	6,654	4,227	16,877	15,567	1,310	710	633	77
1930	28,353	22,769	5,584	10,937	6,705	4,232	16,601	15,333	1,268	815	731	84
1929	29,060	22,842	6,218	11,385	6,733	4,652	16,819	15,381	1,438	856	728	128
1928	28,367	22,306	6,061	11,083	6,445	4,638	16,502	15,175	1,327	782	686	96
1927	28,421	22,143	6,278	11,071	6,264	4,807	16,579	15,202	1,377	771	677	94
1926	28,611	22,208	6,403	11,363	6,452	4,911	16,551	15,138	1,413	697	618	79
1925	28,152	21,691	6,461	11,171	6,220	4,951	16,353	14,927	1,426	628	544	84
1924	27,968	21,703	6,265	10,828	5,992	4,836	16,474	15,124	1,350	666	587	79

TABLE A7. Gross and Net Production, Imports, Exports, and Consumption of Agricultural Materials in Constant 1972 Dollars, by Major Groups: 1961 to 1977

(Millions of dollars)

Year	Production		Imports	Exports	Net consumption	Production		Imports	Exports	Net consumption	Production		Imports	Exports	Net consumption
	Gross	Net[1]				Gross	Net[1]				Gross	Net[1]			
	All agricultural materials					All crops					Food grains				
1977	67,431	55,434	5,996	10,299	48,340	34,407	23,118	4,249	9,135	15,506	3,937	3,233	9	1,889	986
1976	65,234	53,608	6,303	10,173	48,712	32,249	21,307	4,507	9,025	15,899	4,187	3,782	9	1,991	1,001
1975	63,602	52,697	5,782	9,285	46,521	32,619	22,325	4,329	8,306	15,500	4,107	3,736	9	2,351	934
1974	60,821	48,596	5,620	9,247	46,505	29,242	17,645	4,076	8,277	15,052	3,452	3,096	12	1,884	916
1973	61,764	49,007	6,171	10,008	45,744	31,913	19,774	4,280	9,027	15,669	3,271	2,765	9	2,678	951
1972	61,451	48,235	6,263	7,811	47,089	29,983	17,421	4,387	6,822	15,292	3,008	2,417	11	1,681	1,029
1971	61,464	49,053	5,685	6,797	46,958	29,637	17,852	4,017	5,767	15,080	3,140	2,542	14	1,314	946
1970	57,827	45,593	5,552	6,654	45,885	26,910	15,298	3,733	5,766	14,720	2,745	2,186	11	1,449	995
1969	58,251	46,382	5,413	5,653	45,800	27,945	16,727	3,697	4,817	15,143	2,947	2,425	7	1,122	962
1968	57,828	46,434	5,833	6,102	45,585	27,402	16,641	4,089	5,244	14,790	3,070	2,519	5	1,384	939
1967	56,932	45,942	5,233	6,023	44,471	26,765	16,247	3,700	5,221	14,444	2,961	2,601	7	1,425	929
1966	54,784	43,404	5,265	6,420	43,571	25,569	14,869	3,648	5,624	14,322	2,572	2,139	11	1,749	917
1965	54,909	44,726	4,792	6,075	42,822	26,069	16,539	3,427	5,112	14,095	2,569	2,137	10	1,425	925
1964	54,064	43,644	4,816	6,658	43,144	24,301	14,500	3,540	5,300	13,857	2,502	2,237	11	1,634	899
1963	53,517	43,109	5,324	5,758	41,925	25,238	15,428	3,665	4,650	13,608	2,251	1,955	13	1,431	886
1962	51,814	41,416	5,285	5,128	41,175	24,363	14,575	3,698	4,335	13,639	2,116	1,764	13	1,204	880
1961	51,384	40,852	4,895	5,135	40,485	23,966	14,088	3,601	4,375	13,474	2,342	2,057	15	1,373	870
	Feed grains, hay, silage, and forage					Vegetables, including potatoes					Fruits and tree nuts				
1977	13,241	4,421	18	2,444	970	4,103	3,943	113	210	3,900	2,362	2,362	424	327	2,455
1976	12,597	3,845	17	2,607	938	4,089	3,939	111	231	3,857	2,448	2,448	399	351	2,579
1975	12,337	4,123	24	2,034	831	4,201	4,050	100	172	3,866	2,531	2,531	412	343	2,559
1974	10,552	991	18	1,887	748	4,152	3,999	115	159	3,802	2,380	2,380	376	294	2,383
1973	12,521	2,494	13	2,101	876	3,927	3,800	129	174	3,818	2,416	2,416	378	274	2,385
1972	12,190	2,035	23	1,411	730	3,818	3,679	117	143	3,703	1,994	1,994	404	236	2,219
1971	12,546	3,069	15	862	830	3,854	3,697	107	133	3,691	2,225	2,225	386	244	2,379
1970	10,214	891	17	994	834	3,820	3,659	109	137	3,643	2,028	2,028	339	230	2,153
1969	10,966	1,856	14	869	776	3,796	3,637	89	131	3,655	2,216	2,216	351	202	2,277
1968	10,659	1,954	11	976	877	4,002	3,840	89	128	3,640	1,771	1,771	358	163	1,997
1967	11,007	2,498	13	991	704	3,766	3,600	85	127	3,443	1,918	1,918	310	189	2,020
1966	10,045	1,195	10	1,214	762	3,693	3,516	68	131	3,428	1,848	1,848	308	195	1,957
1965	10,152	2,380	11	1,080	788	3,603	3,472	64	119	3,369	1,893	1,893	295	184	2,003
1964	8,942	766	18	844	785	3,387	3,264	58	124	3,287	1,755	1,755	295	164	1,851
1963	9,817	1,646	15	792	765	3,506	3,366	54	148	3,292	1,767	1,767	277	161	1,962
1962	9,356	1,296	11	828	753	3,575	3,419	58	113	3,288	1,806	1,806	256	186	1,818
1961	9,156	902	22	554	750	3,563	3,404	54	105	3,221	1,792	1,792	293	158	1,902
	Oil crops					Sugar and other sweets					Coffee, cocoa, and tea				
1977	6,254	4,872	824	2,706	2,239	685	580	664	3	1,106	1	1	1,314	47	1,360
1976	4,732	3,335	825	2,500	2,176	756	637	512	8	1,002	1	1	1,728	31	1,732
1975	5,374	4,091	799	1,997	2,089	766	653	452	21	1,084	1	1	1,687	40	1,605
1974	4,521	3,217	452	2,350	1,764	609	517	589	8	1,083	1	1	1,647	34	1,727
1973	5,448	4,247	464	2,123	1,809	678	577	575	4	1,165	2	2	1,854	40	1,804
1972	4,671	3,290	488	2,061	1,829	745	624	659	6	1,283	2	2	1,825	34	1,821
1971	4,254	3,010	347	1,956	1,568	678	567	621	8	1,180	2	2	1,875	24	1,720
1970	4,134	2,867	305	1,842	1,480	669	566	602	7	1,153	3	3	1,693	27	1,750
1969	4,101	2,922	304	1,405	1,587	676	570	603	8	1,203	3	3	1,661	24	1,767
1968	4,032	2,953	282	1,293	1,431	663	563	617	8	1,136	3	3	2,027	29	1,851
1967	3,529	2,448	275	1,213	1,421	584	493	570	7	1,050	3	3	1,777	25	1,821
1966	3,446	2,415	272	1,119	1,360	584	496	537	7	1,025	3	3	1,813	26	1,778
1965	3,377	2,399	183	1,146	1,256	589	512	492	8	995	4	4	1,768	28	1,793
1964	2,880	1,896	284	1,103	1,251	645	559	471	1	1,026	3	3	1,813	35	1,799
1963	2,874	1,914	255	837	1,126	631	541	642	3	1,126	6	6	1,893	32	1,803
1962	2,746	1,763	291	825	1,167	514	439	587	7	1,004	4	4	1,930	31	1,803
1961	2,719	1,781	279	622	1,153	502	430	573	6	1,005	6	6	1,831	27	1,775
	Cotton					Tobacco					Other crops				
1977	2,072	2,072	201	777	948	1,582	1,582	329	705	1,163	170	52	353	27	378
1976	1,527	1,527	225	634	1,018	1,733	1,733	348	647	1,231	179	60	333	25	366
1975	1,218	1,218	156	680	901	1,786	1,786	381	632	1,226	298	136	309	36	406
1974	1,694	1,694	156	904	986	1,629	1,629	369	718	1,222	246	121	342	39	421
1973	1,960	1,960	172	933	1,090	1,424	1,424	355	661	1,383	266	89	331	39	386
1972	1,902	1,902	193	551	1,146	1,430	1,430	344	661	1,193	223	48	323	38	340
1971	1,309	1,309	153	658	1,220	1,397	1,397	199	532	1,208	232	74	300	36	337
1970	1,490	1,490	146	486	1,211	1,561	1,561	231	561	1,211	246	47	280	33	291
1969	1,422	1,422	153	412	1,259	1,475	1,475	241	618	1,288	343	201	274	26	437
1968	1,542	1,542	152	609	1,368	1,399	1,399	272	633	1,279	261	97	276	21	357
1967	1,043	1,043	155	624	1,376	1,609	1,609	265	599	1,282	345	209	243	21	439
1966	1,531	1,531	164	571	1,477	1,543	1,543	228	587	1,321	304	183	237	25	393
1965	2,069	2,069	122	594	1,404	1,517	1,517	230	505	1,298	296	156	252	23	383
1964	2,122	2,122	105	806	1,300	1,822	1,822	238	558	1,347	243	76	247	31	301
1963	2,225	2,225	109	680	1,077	1,918	1,918	185	536	1,308	243	90	222	30	272
1962	2,099	2,099	112	611	1,341	1,894	1,894	213	503	1,309	253	91	227	27	284
1961	1,972	1,972	76	977	1,184	1,685	1,685	243	527	1,363	229	59	215	26	262

TABLE A7. Gross and Net Production, Imports, Exports, and Consumption of Agricultural Materials in Constant 1972 Dollars, by Major Groups: 1961 to 1977—Continued

(Millions of dollars)

Year	Production		Imports	Exports	Net consumption	Production		Imports	Exports	Net consumption	Production		Imports	Exports	Net consumption
	Gross	Net[1]				Gross	Net[1]				Gross	Net[1]			
	All livestock					Meat animals					Poultry and eggs				
1977	33,024	32,316	1,747	1,164	32,834	21,458	21,333	1,425	860	21,987	4,211	4,076	6	153	3,940
1976	32,985	32,301	1,796	1,148	32,813	21,614	21,489	1,495	868	22,066	4,181	4,056	3	147	3,903
1975	30,983	30,372	1,453	979	31,021	20,146	20,047	1,236	740	20,614	3,906	3,792	4	104	3,729
1974	31,579	30,951	1,544	970	31,453	20,647	20,549	1,229	740	21,046	4,003	3,891	5	92	3,797
1973	29,851	29,233	1,891	981	30,075	18,934	18,838	1,471	733	19,513	3,993	3,871	6	88	3,768
1972	31,468	30,814	1,876	989	31,797	20,156	20,061	1,560	665	21,027	4,091	3,970	3	90	3,897
1971	31,827	31,201	1,668	1,030	31,878	20,668	20,570	1,372	692	21,250	4,034	3,913	5	81	3,834
1970	30,917	30,295	1,819	888	31,165	19,847	19,752	1,434	627	20,516	4,005	3,882	11	80	3,792
1969	30,306	29,655	1,716	836	30,657	19,468	19,375	1,313	595	20,098	3,816	3,695	5	76	3,661
1968	30,426	29,793	1,744	858	30,795	19,622	19,535	1,275	584	20,245	3,718	3,606	4	75	3,568
1967	30,167	29,515	1,533	802	30,027	19,144	19,060	1,091	556	19,584	3,810	3,699	3	80	3,581
1966	29,215	28,535	1,617	796	29,249	18,303	18,228	1,091	534	18,719	3,618	3,506	5	78	3,408
1965	28,840	28,187	1,365	963	28,727	17,852	17,791	924	555	18,257	3,425	3,323	1	85	3,249
1964	29,763	29,144	1,276	1,358	29,287	18,719	18,647	898	651	18,873	3,311	3,215	2	92	3,126
1963	28,279	27,681	1,659	1,108	28,317	17,399	17,362	1,241	518	18,021	3,221	3,128	1	85	3,040
1962	27,451	26,841	1,587	793	27,536	16,513	16,472	1,172	416	17,222	3,180	3,087	2	90	3,022
1961	27,418	26,764	1,294	760	27,011	16,450	16,411	913	443	16,846	3,211	3,119	2	89	2,999
	Dairy products and honey					Wool and mohair					Horses and other livestock products				
1977	7,270	6,822	115	94	6,678	46	46	116	14	148	39	39	85	43	81
1976	7,103	6,669	112	90	6,608	48	48	107	16	145	39	39	79	27	91
1975	6,840	6,442	98	86	6,507	52	52	68	24	110	39	39	47	25	61
1974	6,833	6,415	170	71	6,441	57	57	68	24	101	39	39	72	43	68
1973	6,823	6,423	242	84	6,586	62	62	98	30	141	39	39	74	46	67
1972	7,114	6,676	97	173	6,591	65	65	145	46	184	42	42	71	15	98
1971	7,008	6,601	73	221	6,498	71	71	157	24	201	46	46	61	12	95
1970	6,942	6,538	101	140	6,493	73	73	205	15	272	50	50	75	26	99
1969	6,892	6,455	86	143	6,467	77	77	240	14	314	53	53	72	8	117
1968	6,947	6,513	90	169	6,501	86	86	298	20	361	53	53	77	10	120
1967	7,069	6,612	134	139	6,436	89	89	234	17	310	55	55	71	10	116
1966	7,142	6,649	123	155	6,604	95	95	317	20	389	57	57	81	9	129
1965	7,405	6,915	45	299	6,703	99	99	324	20	392	59	59	71	4	126
1964	7,571	7,120	42	605	6,799	101	101	258	7	355	61	61	76	3	134
1963	7,487	7,019	41	487	6,720	109	109	308	15	408	63	63	68	3	128
1962	7,581	7,105	39	273	6,747	113	113	302	12	411	64	64	72	2	134
1961	7,573	7,050	39	214	6,656	117	117	265	12	370	67	67	75	2	140

[1]Excludes seed and feed, except feed for horses and mules.

TABLE A8. Production, Imports, Exports, and Consumption of Fishery Products in Constant 1972 Dollars, by Major Groups: 1967 to 1977

(Millions of dollars)

Year	Fishery products, total					Finfish					Shellfish				
	Production	Imports	Exports	Consumption		Production	Imports	Exports	Consumption		Production	Imports	Exports	Consumption	
				Total	Foods only				Total	Foods only				Total	Foods only
1977	838	1,083	117	1,804	1,717	372	623	65	931	844	466	460	52	873	873
1976	811	1,124	92	1,843	1,723	397	679	48	1,028	909	414	445	44	815	814
1975	697	954	94	1,557	1,449	341	564	49	856	749	356	390	45	701	700
1974	719	968	76	1,610	1,525	339	557	31	864	782	380	411	45	746	744
1973	700	1,056	111	1,645	1,554	338	672	50	960	871	362	384	61	685	683
1972	746	1,271	94	1,923	1,683	340	802	38	1,104	865	406	469	56	819	817
1971	762	1,006	84	1,684	1,501	361	624	37	948	768	401	382	47	736	733
1970	795	1,020	74	1,741	1,490	400	623	30	993	744	395	397	44	748	746
1969	719	1,027	70	1,676	1,456	347	632	31	948	731	372	395	39	728	726
1968	735	1,231	39	1,927	1,470	363	835	15	1,183	728	372	396	24	744	742
1967	749	986	50	1,685	1,342	365	645	26	984	642	384	341	24	701	700

TABLE A9. Production, Imports, Exports, and Consumption of Minerals in Constant 1972 Dollars, by Major Mineral Products: 1900 to 1977

(Millions of dollars)

Year	Minerals, total				Iron and ferroalloy metals											
					Total				Iron				All ferroalloy metals			
	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption
1977	28,398	15,381	2,680	40,908	926	1,586	525	2,250	673	863	309	1,425	253	723	216	825
1976	28,387	13,474	2,546	39,466	1,199	1,520	637	2,052	957	825	375	1,305	242	695	262	747
1975	28,074	11,158	2,649	35,881	1,203	1,385	619	1,892	971	786	403	1,193	232	599	216	699
1974	29,355	12,147	2,610	39,029	1,279	1,666	676	2,409	1,032	885	433	1,496	247	781	243	913
1973	30,268	11,952	2,456	40,193	1,331	1,519	626	2,453	1,078	815	421	1,586	253	704	205	867
1972	30,018	9,856	2,144	38,068	1,174	1,410	448	2,297	921	774	302	1,536	253	636	146	761
1971	29,407	8,609	2,108	35,760	1,230	1,346	458	2,072	981	817	292	1,396	249	529	166	676
1970	30,250	7,938	2,628	34,732	1,336	1,332	716	1,934	1,077	763	469	1,296	259	569	247	638
1969	28,977	7,546	2,336	34,552	1,286	1,240	637	2,101	1,052	734	396	1,480	234	506	241	621
1968	27,888	7,574	3,405	33,229	1,245	1,372	442	2,190	1,022	833	292	1,543	223	539	150	647
1967	26,864	6,866	3,468	31,632	1,202	1,242	440	2,061	986	706	292	1,377	216	536	148	684
1966	26,204	6,440	2,540	31,727	1,254	1,326	413	2,405	1,039	724	279	1,456	215	602	134	949
1965	24,961	6,082	3,678	29,608	1,195	1,357	406	2,210	1,007	685	291	1,391	188	672	115	819
1964	24,078	5,485	2,707	27,965	1,145	1,125	560	1,808	976	579	345	1,253	169	546	215	555
1963	23,062	5,071	2,104	26,468	995	956	484	1,541	839	462	288	1,078	156	494	196	463
1962	22,115	5,167	2,047	25,670	937	927	349	1,518	799	437	249	962	138	490	100	556
1961	21,431	4,604	2,968	24,207	953	837	535	1,329	786	342	329	862	167	495	206	467
1960	21,294	4,991	1,875	23,904	1,142	867	492	1,387	966	435	300	957	176	432	192	430
1959	20,460	5,198	1,295	23,927	791	977	284	1,429	652	477	211	909	139	500	73	520
1958	19,695	4,943	1,644	22,692	858	747	263	1,292	730	333	204	809	128	414	59	483
1957	21,436	5,248	2,725	23,023	1,272	1,006	460	1,601	1,106	378	370	979	166	628	90	622
1956	21,282	4,679	2,143	23,012	1,196	974	459	1,653	1,021	354	327	1,002	175	620	132	651
1955	20,056	4,139	1,755	22,284	1,252	886	365	1,804	1,071	269	282	1,094	181	617	83	710
1954	18,065	3,641	1,518	20,232	966	768	248	1,498	808	188	183	828	158	580	65	670
1953	18,914	3,714	1,387	20,801	1,354	751	211	1,782	1,210	160	160	1,152	144	591	51	630
1952	18,496	4,444	1,592	19,950	1,114	615	223	1,394	1,002	133	191	877	112	482	32	517
1951	18,839	2,925	2,476	19,844	1,304	573	188	1,632	1,204	175	169	1,139	100	398	19	493
1950	17,048	3,325	1,870	18,962	1,064	537	160	1,531	986	134	136	1,035	78	403	24	496
1949	15,212	3,643	1,326	16,663	926	447	210	1,182	866	103	188	814	60	344	22	368
1948	17,490	5,075	1,733	17,641	1,092	484	222	1,253	1,015	76	194	804	77	408	28	449
1947	16,858	4,825	2,218	16,943	1,026	389	363	1,042	954	53	334	697	72	336	29	345
1946	14,932	2,290	1,719	15,486	790	351	194	925	730	30	176	552	60	321	18	373
1945	15,243	2,196	1,800	16,177	1,020	373	196	1,184	927	17	178	787	93	356	18	397
1944	15,839	2,034	3,343	16,181	1,095	417	248	1,381	975	9	216	867	120	408	32	514
1943	15,325	1,993	1,685	15,926	1,230	448	274	1,396	1,056	8	229	839	174	440	45	557
1942	14,934	2,284	1,313	15,309	1,257	424	271	1,344	1,100	10	226	806	157	414	45	538
1941	14,041	3,677	1,106	14,843	1,069	432	241	1,293	962	26	213	845	107	406	28	448
1940	12,791	7,766	1,446	12,284	851	336	317	880	763	27	278	542	88	309	39	338
1939	11,436	6,305	1,438	10,912	605	219	204	589	531	30	162	373	74	189	42	216
1938	10,200	3,899	1,369	9,300	359	141	178	294	287	26	139	154	72	115	39	140
1937	12,087	3,591	1,412	11,215	819	242	252	792	746	35	194	585	73	207	58	207
1936	10,839	2,853	1,004	10,659	553	212	123	667	507	36	89	477	46	176	34	190
1935	9,154	3,249	993	8,848	347	143	140	377	315	24	84	280	32	119	56	97
1934	8,502	2,561	1,012	8,150	276	101	95	285	252	21	76	197	24	80	19	88
1933	7,900	1,271	1,592	7,695	193	90	44	245	179	17	36	160	14	73	8	85
1932	7,269	1,242	2,437	7,077	109	46	24	83	100	13	18	49	9	33	6	34
1931	8,959	1,481	1,908	8,904	331	91	42	353	318	24	36	279	13	67	6	74
1930	10,765	1,246	1,488	10,206	616	153	75	662	600	39	71	536	16	114	4	126
1929	12,287	1,840	1,792	11,876	770	207	114	883	750	45	108	707	20	162	6	176
1928	11,303	1,565	2,558	11,068	660	154	104	719	639	40	100	588	21	114	4	131
1927	11,386	1,383	1,576	10,738	656	130	77	710	635	40	73	603	21	90	4	107
1926	11,454	1,457	1,531	11,104	717	141	68	790	698	48	67	679	19	93	1	111
1925	10,590	1,404	1,577	10,401	660	126	54	746	640	40	50	644	20	86	4	102
1924	10,172	1,701	1,417	9,955	567	99	54	590	554	31	50	513	13	68	4	77
1923	11,009	1,705	1,204	10,416	732	110	59	787	718	41	58	705	14	69	1	82
1922	8,061	1,707	897	8,275	493	71	58	538	482	22	50	486	11	49	8	52
1921	7,535	2,216	901	7,272	293	35	57	256	301	6	57	225	2	29	(Z)	31
1920	9,565	1,969	1,269	9,222	710	117	121	724	696	21	120	615	14	96	1	109
1919	8,306	1,014	1,366	8,370	634	103	110	581	624	10	106	482	10	93	4	99
1918	9,705	1,008	1,313	9,044	760	147	144	787	715	10	127	622	45	137	17	165
1917	9,684	2,913	1,721	9,033	806	140	170	775	770	17	148	638	36	123	22	137
1916	9,148	1,131	1,234	8,676	793	136	171	785	764	18	142	667	29	118	29	118
1915	8,059	672	1,017	7,332	578	100	109	571	566	18	84	502	12	82	25	69
1914	7,562	619	1,060	6,839	427	84	64	437	421	19	40	390	6	65	24	47
1913	8,236	770	1,148	7,632	644	118	98	643	638	31	71	577	6	87	27	66
1912	7,725	704	992	7,274	574	101	97	595	568	26	76	535	6	75	21	60
1911	7,286	704	909	6,758	460	78	76	434	455	22	55	394	5	56	21	40
1910	7,369	655	835	6,904	601	94	54	608	594	36	41	556	7	58	13	52
1909	6,888	598	794	6,365	545	68	42	567	538	24	32	526	7	44	10	41
1908	6,129	625	796	5,550	382	45	34	363	377	12	26	333	5	33	8	30
1907	6,776	562	659	6,316	554	62	39	578	547	24	32	540	7	38	7	38
1906	6,082	585	840	5,818	511	78	40	554	507	22	32	502	4	56	8	52
1905	5,830	454	651	5,482	457	51	34	483	453	17	26	453	4	34	8	30
1904	5,136	458	728	4,756	295	38	34	316	292	10	28	291	3	28	6	25
1903	5,135	482	505	4,937	376	88	10	430	374	32	9	373	2	56	1	57
1902	4,554	483	540	4,414	384	89	11	467	382	37	10	414	2	52	1	53
1901	4,329	549	547	4,135	313	163	23	448	310	15	17	303	3	148	6	145
1900	4,062	396	488	3,768	299	94	33	361	297	13	27	284	2	81	6	77

(Z) Less than 0.5 million dollars.

TABLE A9. Production, Imports, Exports, and Consumption of Minerals in Constant 1972 Dollars, by Major Mineral Products: 1900 to 1977—Continued

(Millions of dollars)

Year	Iron and ferroalloy metals--Continued								Other metals							
	Ferroalloy metals--Continued								Total				Gold			
	Manganese				Tungsten											
	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption[1]
1977	2	52	1	77	15	22	11	39	1,831	2,085	936	3,203	56	225	355	187
1976	2	63	1	80	15	19	13	37	1,854	2,090	727	3,384	53	135	146	185
1975	1	62	3	67	14	21	12	27	1,680	1,588	821	2,382	53	135	136	145
1974	2	54	2	87	19	35	15	52	1,866	2,031	719	3,297	57	134	29	195
1973	2	59	1	87	19	33	8	55	1,958	1,891	712	3,400	60	195	30	305
1972	1	61	1	76	21	19	4	36	1,934	1,792	604	3,202	73	310	39	323
1971	2	64	1	63	18	2	10	36	1,830	1,699	588	2,922	76	365	65	305
1970	3	60	1	71	25	4	55	40	2,004	1,685	679	2,703	88	337	·54	259
1969	4	69	1	76	19	4	21	43	1,829	1,626	610	2,903	87	296	17	329
1968	3	59	1	69	21	4	3	46	1,517	1,963	1,935	2,860	76	301	1,212	305
1967	3	65	1	66	21	4	4	39	1,295	1,913	1,953	2,925	80	470	1,454	330
1966	3	83	1	78	21	14	1	51	1,679	1,364	1,206	3,259	91	61	661	333
1965	3	114	1	112	19	12	1	34	1,612	1,159	2,388	2,583	86	147	1,859	274
1964	3	89	1	89	23	10	2	41	1,576	1,066	1,252	2,458	74	60	611	223
1963	3	69	(Z)	74	14	17	1	31	1,516	1,048	751	2,173	74	65	293	148
1962	3	59	1	74	21	14	1	33	1,555	1,233	986	2,264	78	218	552	180
1961	3	68	(Z)	80	20	9	1	27	1,503	1,021	1,746	2,015	78	81	1,121	141
1960	5	66	(Z)	74	18	11	4	24	1,435	1,527	646	1,883	84	472	3	151
1959	9	54	(Z)	44	9	17	1	29	1,203	1,652	286	2,256	81	430	3	128
1958	11	50	(Z)	46	10	18	1	26	1,283	1,794	476	2,147	89	411	45	93
1957	14	80	(Z)	86	14	38	1	39	1,410	1,975	759	2,190	90	391	242	73
1956	13	67	(Z)	81	36	57	3	89	1,355	1,616	407	2,174	91	189	38	71
1955	14	63	(Z)	83	40	56	2	95	1,194	1,428	368	2,053	94	148	9	65
1954	9	61	(Z)	74	34	65	1	99	1,050	1,332	438	1,860	93	55	25	64
1953	12	86	(Z)	85	23	74	1	93	1,147	1,432	286	2,208	99	68	44	109
1952	9	61	(Z)	51	19	46	1	67	1,179	2,402	312	2,213	96	1,069	39	139
1951	9	56	(Z)	74	16	21	1	38	1,136	1,047	1,131	1,873	100	118	887	100
1950	10	56	(Z)	68	12	46	1	56	1,118	1,490	983	2,168	121	235	741	141
1949	9	40	(Z)	41	6	17	2	24	948	2,213	377	1,692	100	1,117	110	157
1948	12	43	1	61	11	21	4	22	1,021	3,748	553	1,648	102	2,797	264	65
1947	11	39	1	38	7	19	1	26	1,034	3,722	596	1,666	106	2,804	266	71
1946	11	43	1	63	13	22	1	35	782	1,306	544	1,612	80	553	318	222
1945	15	37	(Z)	40	14	14	2	19	923	1,229	670	1,882	48	135	286	157
1944	18	35	(Z)	63	24	47	5	69	1,213	1,125	2,101	1,748	51	145	1,387	141
1943	18	40	1	58	29	50	3	76	1,407	1,139	612	1,914	68	147	35	125
1942	18	43	(Z)	69	23	37	1	59	1,384	1,568	376	2,029	174	456	(Z)	68
1941	13	46	(Z)	51	16	30	1	46	1,317	2,766	257	2,077	240	1,420	(Z)	54
1940	11	39	1	50	13	18	1	24	1,234	7,036	490	1,119	245	6,116	1	19
1939	9	22	(Z)	29	11	5	1	14	1,070	5,776	423	924	237	5,165	1	10
1938	3	16	(Z)	15	7	3	1	10	896	3,490	389	569	215	2,842	9	-
1937	10	29	(Z)	31	9	16	1	24	1,151	3,021	401	942	208	2,358	67	4
1936	8	27	(Z)	37	6	12	(Z)	17	923	2,340	287	885	192	1,651	39	-4
1935	5	14	(Z)	20	6	4	2	9	677	2,838	281	571	164	2,387	3	-46
1934	3	12	(Z)	16	5	3	1	7	506	2,225	389	336	141	1,709	80	-89
1933	2	11	(Z)	16	2	2	2	2	414	969	1,066	457	116	468	847	-15
1932	1	4	(Z)	4	1	(Z)	(Z)	1	440	899	1,954	266	118	672	1,748	-1
1931	4	10	(Z)	15	3	1	2	2	705	1,027	1,299	684	112	505	947	15
1930	8	16	(Z)	24	2	11	(Z)	13	922	630	699	661	107	196	184	36
1929	9	24	(Z)	33	2	17	(Z)	19	1,196	1,143	906	1,180	105	447	267	61
1928	9	20	(Z)	27	3	6	(Z)	10	1,118	1,002	1,731	1,083	109	292	1,021	64
1927	11	21	(Z)	33	3	6	(Z)	9	1,063	908	818	989	106	261	135	64
1926	13	21	(Z)	34	3	9	(Z)	12	1,114	920	671	1,087	113	228	23	64
1925	14	21	(Z)	35	3	4	(Z)	7	1,092	912	939	1,044	116	296	260	89
1924	10	18	(Z)	28	1	1	(Z)	2	1,037	1,188	766	985	123	549	67	93
1923	13	11	(Z)	23	1	(Z)	(Z)	1	991	1,153	549	989	122	520	49	97
1922	9	16	(Z)	25	(Z)	6	(Z)	6	738	1,068	440	859	116	505	15	89
1921	2	13	(Z)	14	(Z)	5	(Z)	5	483	1,701	354	557	119	1,317	9	57
1920	13	21	(Z)	34	1	10	(Z)	11	868	1,405	486	908	121	861	96	132
1919	8	20	1	27	1	26	(Z)	27	854	664	808	952	139	122	298	136
1918	26	18	1	44	12	31	3	40	1,207	677	681	1,104	163	136	20	80
1917	17	23	(Z)	40	15	13	4	23	1,269	2,601	1,046	927	197	2,078	256	86
1916	11	19	(Z)	29	14	11	1	23	1,334	856	602	1,043	224	383	39	102
1915	5	9	(Z)	15	5	4	1	10	1,113	447	502	813	240	119	46	57
1914	3	14	(Z)	16	3	2	(Z)	4	926	411	612	543	224	90	107	38
1913	3	18	(Z)	21	3	4	(Z)	7	947	526	626	659	218	129	105	44
1912	2	9	(Z)	11	3	3	(Z)	6	940	501	533	677	225	93	68	45
1911	2	12	(Z)	14	3	1	(Z)	3	880	543	488	661	237	142	3	68
1910	3	11	(Z)	14	4	4	(Z)	9	852	476	499	629	231	93	70	46
1909	3	9	(Z)	11	4	4	(Z)	9	872	460	477	611	242	90	57	49
1908	3	9	(Z)	12	2	2	(Z)	4	760	525	497	478	224	225	103	62
1907	3	12	(Z)	15	4	1	(Z)	4	720	423	363	496	213	131	61	51
1906	2	11	(Z)	13	2	(Z)	(Z)	2	780	433	331	605	238	136	17	64
1905	2	9	(Z)	11	2	(Z)	(Z)	2	741	339	405	502	215	80	78	39
1904	1	5	(Z)	6	2	(Z)	(Z)	2	687	361	505	436	197	119	157	29
1903	1	9	(Z)	10	1	(Z)	(Z)	1	614	311	313	452	180	74	65	33
1902	1	9	(Z)	9	1	(Z)	(Z)	1	617	320	365	470	196	89	94	35
1901	2	4	(Z)	7	1	(Z)	(Z)	1	585	323	336	376	192	94	109	32
1900	2	11	(Z)	13	(Z)	(Z)	(Z)	-	587	243	275	367	193	33	(Z)	41

(Z) Less than 0.5 million dollars.

[1]Represents net consumption in industry and the arts (quantity issued for industrial use less returns from industrial use).

TABLE A9. Production, Imports, Exports, and Consumption of Minerals in Constant 1972 Dollars, by Major Mineral Products: 1900 to 1977—Continued

(Millions of dollars)

Year	Other metals--Continued															
	Silver				Copper				Lead				Zinc			
	Production	Imports	Exports	Consumption[1]	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption
1977	49	123	29	137	1,131	541	326	1,280	108	71	22	159	81	127	8	206
1976	44	114	19	158	1,208	548	358	1,459	112	47	15	150	85	156	9	227
1975	45	117	42	143	1,063	328	407	872	114	30	18	128	82	150	10	233
1974	44	173	24	160	1,201	627	392	1,448	122	36	27	164	87	129	16	230
1973	49	169	15	210	1,292	445	416	1,386	111	54	27	183	84	139	11	263
1972	48	85	38	159	1,252	422	320	1,405	114	60	10	171	83	126	5	239
1971	54	75	16	131	1,145	380	320	1,299	107	57	6	175	88	148	6	245
1970	58	81	36	95	1,293	430	379	1,224	105	58	3	144	93	132	7	211
1969	54	93	115	105	1,160	393	299	1,248	93	80	1	162	97	163	8	256
1968	42	92	163	153	905	703	398	1,154	66	87	4	163	92	145	11	238
1967	42	63	92	221	717	584	291	1,174	58	101	2	157	96	121	5	218
1966	56	81	110	238	1,074	453	323	1,480	61	71	2	137	99	126	4	237
1965	51	71	51	177	1,016	226	385	948	55	70	4	133	107	104	4	232
1964	47	67	141	159	938	269	379	863	52	70	5	132	103	85	8	195
1963	46	77	41	142	913	168	324	766	46	76	1	129	92	92	7	190
1962	48	99	17	143	924	147	341	708	43	78	1	134	88	93	8	177
1961	45	66	51	138	875	132	476	586	48	77	2	119	81	86	12	155
1960	40	79	35	133	811	213	503	457	46	70	1	104	76	90	17	149
1959	41	78	12	131	620	271	205	711	47	81	1	138	75	105	5	178
1958	44	215	3	111	736	335	385	744	48	114	1	145	71	128	4	190
1957	51	267	14	124	816	467	431	821	62	108	1	159	93	166	5	242
1956	51	211	7	129	830	467	302	916	65	93	2	152	94	124	6	211
1955	49	109	7	131	752	479	285	929	62	84	1	155	90	102	7	195
1954	47	117	2	111	628	476	348	800	61	89	1	147	82	113	10	193
1953	49	105	2	138	695	526	200	976	63	84	1	150	96	119	5	195
1952	51	97	3	125	695	507	218	990	72	119	1	181	116	114	13	199
1951	51	105	7	136	697	377	183	922	72	42	1	123	119	52	11	160
1950	55	140	7	141	684	468	197	1,005	80	104	1	186	108	70	5	193
1949	46	124	5	114	567	437	227	722	76	77	1	147	104	51	13	130
1948	49	109	2	136	628	368	249	764	72	61	(Z)	124	110	48	16	149
1947	46	109	36	128	637	341	247	788	71	42	1	111	111	61	24	170
1946	31	80	51	113	457	268	147	661	62	25	1	93	101	53	12	153
1945	38	66	128	163	581	675	233	971	72	61	1	122	107	78	5	176
1944	44	67	179	155	731	576	481	764	77	62	5	140	125	84	6	196
1943	53	82	46	153	821	554	459	922	84	62	1	135	130	107	19	199
1942	70	140	2	131	811	589	319	1,079	92	97	1	184	134	73	25	170
1941	87	174	10	95	720	542	210	1,065	84	81	5	154	131	48	18	161
1940	92	215	12	58	661	274	434	515	84	25	5	104	116	22	17	133
1939	84	157	29	58	548	174	359	407	76	17	15	91	102	13	4	125
1938	80	318	5	26	420	155	355	204	68	7	10	66	90	4	1	78
1937	93	204	5	36	634	174	307	434	86	4	5	92	110	7	1	111
1936	80	308	5	24	462	138	224	456	70	4	5	81	101	4	1	108
1935	63	68	7	7	285	182	263	254	61	4	1	63	90	4	1	98
1934	43	227	29	15	179	152	269	152	53	4	1	52	76	4	4	73
1933	31	211	56	14	143	96	155	152	50	6	5	45	67	1	1	70
1932	29	76	55	19	180	41	144	36	55	6	5	46	51	1	1	53
1931	38	105	107	32	398	221	236	304	75	7	5	66	71	1	1	76
1930	63	129	170	35	529	153	323	262	103	14	10	98	104	1	5	87
1929	80	141	186	39	750	271	421	573	119	19	15	123	126	5	7	117
1928	75	150	189	32	681	296	482	507	116	31	22	124	122	5	10	119
1927	78	125	168	36	620	271	462	438	123	31	25	128	125	4	19	104
1926	80	140	182	38	648	293	415	509	125	22	14	134	136	4	29	107
1925	87	119	179	38	630	246	443	462	125	22	20	128	124	4	30	98
1924	82	140	204	32	603	290	456	459	109	22	16	116	111	(Z)	17	96
1923	92	143	139	36	556	252	332	431	101	14	10	103	107	1	13	93
1922	80	131	109	41	363	202	294	332	88	17	7	98	82	4	10	86
1921	60	113	90	38	175	132	246	204	76	19	6	89	45	5	1	47
1920	73	99	111	24	460	182	249	312	92	20	6	106	102	4	22	78
1919	67	96	257	34	456	161	208	348	80	14	12	81	96	1	28	71
1918	88	88	318	35	717	216	299	553	104	11	20	96	111	6	22	98
1917	92	95	197	22	713	208	526	406	116	7	19	104	125	18	42	94
1916	102	72	129	44	755	174	371	482	111	4	22	92	124	22	38	107
1915	95	68	124	39	559	119	282	406	99	10	25	84	102	11	24	90
1914	90	64	117	36	432	116	354	179	93	6	16	83	73	4	17	63
1913	92	82	148	26	464	153	355	276	89	10	10	91	71	5	7	63
1912	85	96	146	35	468	155	298	299	81	15	14	81	67	6	7	67
1911	80	104	154	29	418	125	301	266	78	22	20	87	58	5	10	57
1910	75	102	136	41	409	130	271	282	71	16	14	70	57	5	7	52
1909	75	104	136	43	423	121	260	263	71	20	16	75	53	7	6	57
1908	66	96	119	43	360	83	252	169	61	16	15	57	41	6	7	41
1907	68	72	90	51	319	96	194	175	67	14	10	70	45	6	7	38
1906	75	63	116	22	345	86	175	272	66	16	10	72	45	6	11	40
1905	73	53	99	27	335	78	205	216	61	17	11	66	46	4	7	43
1904	73	53	105	22	305	69	210	186	58	20	16	62	41	(Z)	10	31
1903	70	51	102	19	262	64	117	202	55	20	16	62	35	(Z)	7	28
1902	72	58	105	24	249	53	135	215	52	17	15	61	35	(Z)	11	24
1901	72	66	122	15	227	52	74	157	51	20	19	50	31	(Z)	7	24
1900	75	64	113	26	229	39	130	136	51	20	19	51	29	(Z)	11	18

Z Less than 0.5 million dollars.

[1]Net consumption in industry and the arts (quantity issued for industrial use less returns from industrial use).

TABLE A9. Production, Imports, Exports, and Consumption of Minerals in Constant 1972 Dollars, by Major Mineral Products: 1900 to 1977—Continued

(Millions of dollars)

Year	Other metals--Continued								Mineral fuels							
	Bauxite				All other metals				Mineral fuels, total				Coal			
	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption
1977	26	320	61	276	387	678	135	958	20,802	10,891	826	30,156	5,541	27	468	5,136
1976	25	303	69	272	324	787	111	933	20,722	9,155	828	29,080	5,490	23	496	4,957
1975	23	276	63	200	300	552	145	661	20,803	7,560	849	26,961	5,249	25	546	4,443
1974	25	329	66	284	330	603	194	816	21,289	7,698	820	28,018	4,894	49	501	4,503
1973	24	302	65	302	338	587	148	751	21,995	7,844	778	28,959	4,803	13	445	4,492
1972	23	284	55	266	341	505	137	639	22,337	6,019	779	27,651	4,836	6	469	4,172
1971	25	269	52	234	335	405	123	533	21,968	4,993	786	26,088	4,511	5	475	4,066
1970	27	265	66	208	340	382	134	562	22,470	4,357	962	25,382	4,927	4	598	4,232
1969	24	197	63	165	314	404	107	638	21,354	4,113	809	24,749	4,597	3	472	4,198
1968	21	192	49	163	315	443	98	684	20,769	3,685	754	23,569	4,487	5	420	4,131
1967	21	187	41	169	281	387	68	656	20,147	3,221	827	22,172	4,555	5	411	3,979
1966	23	193	33	166	275	379	73	668	19,084	3,244	687	21,495	4,413	5	415	4,027
1965	21	184	33	174	276	357	52	645	18,041	3,110	675	20,451	4,262	3	419	3,826
1964	20	167	35	158	342	348	73	728	17,504	2,867	690	19,618	4,089	5	410	3,652
1963	19	151	30	145	326	419	55	653	16,969	2,686	701	18,964	3,878	5	422	3,466
1962	19	161	25	161	355	437	42	761	16,167	2,635	563	18,205	3,569	5	332	3,257
1961	14	137	20	132	362	442	64	744	15,691	2,398	541	17,411	3,422	5	302	3,150
1960	21	127	24	109	357	476	63	780	15,506	2,266	588	17,242	3,538	5	313	3,255
1959	21	124	12	138	318	563	48	832	15,312	2,221	603	16,841	3,532	7	322	3,215
1958	18	118	8	131	277	473	30	733	14,634	2,122	797	16,151	3,525	7	433	3,136
1957	23	105	9	110	275	471	57	661	15,837	1,947	1,387	16,131	4,231	7	669	3,540
1956	21	88	6	108	203	444	46	587	15,826	1,778	1,162	16,115	4,338	8	616	3,649
1955	23	76	4	95	124	430	55	483	14,905	1,541	922	15,536	4,017	7	453	3,596
1954	23	77	4	92	116	405	48	453	13,588	1,298	744	14,258	3,469	5	287	3,287
1953	23	73	3	88	122	457	31	552	14,179	1,278	818	14,398	4,014	7	307	3,677
1952	25	53	2	64	124	443	36	515	14,032	1,183	989	14,013	4,203	10	443	3,760
1951	20	44	3	54	77	309	39	378	14,300	1,045	1,079	14,064	4,762	8	534	4,209
1950	17	44	3	61	53	429	29	441	12,972	1,054	657	13,190	4,639	10	254	4,155
1949	16	41	3	51	39	366	18	371	11,666	814	672	12,015	3,997	7	287	3,937
1948	17	40	4	49	43	325	18	361	13,643	644	894	12,872	5,457	5	453	4,854
1947	14	26	4	32	49	339	18	366	13,195	556	1,194	12,531	5,706	5	656	5,008
1946	14	14	3	28	37	313	12	342	11,929	492	925	11,432	4,974	3	419	4,541
1945	14	26	3	43	63	188	14	250	12,108	453	887	11,820	5,257	5	278	5,089
1944	35	12	12	44	150	179	31	308	12,352	351	955	11,768	5,694	8	266	5,424
1943	77	25	13	79	174	162	39	301	11,413	233	762	11,190	5,424	10	264	5,422
1942	31	17	5	43	72	196	24	354	10,865	143	632	10,384	5,360	8	245	4,963
1941	12	16	3	25	43	485	11	523	10,268	345	567	9,990	4,767	7	211	4,464
1940	5	9	3	12	31	375	18	278	9,556	291	601	9,076	4,283	8	170	4,083
1939	4	8	3	9	19	242	12	224	8,675	218	773	8,253	3,757	10	131	3,623
1938	4	5	1	9	19	159	8	186	8,034	192	765	7,503	3,324	10	112	3,274
1937	5	8	3	10	15	266	13	255	9,107	209	720	8,399	4,166	13	132	4,005
1936	5	4	1	9	13	231	12	211	8,415	210	559	8,103	4,147	16	112	4,005
1935	3	3	3	3	11	190	5	192	7,445	198	541	7,175	3,585	13	104	3,489
1934	3	3	1	4	11	126	5	129	7,062	182	499	6,842	3,540	11	112	3,411
1933	1	3	(Z)	4	6	184	2	187	6,707	163	456	6,378	3,246	11	90	3,158
1932	1	3	(Z)	4	6	100	1	109	6,122	263	441	6,119	3,058	13	93	3,044
1931	3	4	1	5	8	184	2	186	7,083	303	541	6,993	3,751	13	125	3,642
1930	4	5	1	9	12	132	6	134	8,116	371	682	7,718	4,548	15	165	4,415
1929	4	5	3	8	12	255	7	259	9,068	381	734	8,486	5,138	16	191	4,977
1928	4	5	1	9	11	223	6	228	8,352	312	694	8,026	4,883	15	179	4,849
1927	4	5	1	9	7	211	8	210	8,506	254	657	7,816	5,075	12	191	4,863
1926	5	5	1	10	7	228	7	225	8,516	295	768	8,047	5,570	21	337	5,176
1925	4	5	1	9	6	220	6	220	7,760	279	559	7,470	4,878	15	186	4,738
1924	4	3	1	5	5	184	5	184	7,586	328	576	7,336	4,895	10	190	4,806
1923	8	3	1	9	5	220	5	220	8,321	358	573	7,611	5,604	22	243	5,168
1922	4	1	(Z)	5	5	208	5	208	6,074	505	377	6,077	4,014	47	136	4,077
1921	1	1	(Z)	3	7	114	2	119	6,135	443	471	5,832	4,384	10	243	4,087
1920	8	1	(Z)	9	12	238	2	247	7,266	378	633	6,831	5,593	12	379	5,077
1919	4	(Z)	(Z)	4	12	270	5	278	6,198	192	431	6,175	4,754	10	227	4,769
1818	9	(Z)	1	8	15	220	1	234	7,145	143	473	6,534	5,787	12	251	5,333
1917	8	(Z)	(Z)	8	18	195	6	207	6,874	119	491	6,560	5,575	12	274	5,313
1916	5	(Z)	1	4	13	201	2	212	6,208	85	451	5,992	5,041	15	236	4,947
1915	4	(Z)	(Z)	4	14	120	1	133	5,653	80	398	5,198	4,579	17	205	4,269
1914	3	1	(Z)	4	11	130	1	140	5,455	68	365	5,069	4,442	15	182	4,247
1913	3	1	(Z)	4	10	146	1	155	5,845	57	399	5,487	4,895	17	225	4,671
1912	3	1	(Z)	4	11	135	(Z)	146	5,445	36	343	5,187	4,585	17	187	4,415
1911	1	(Z)	(Z)	1	8	145	(Z)	153	5,146	20	326	4,818	4,304	14	181	4,137
1910	1	(Z)	(Z)	1	8	130	1	137	5,128	21	270	4,828	4,323	20	147	4,196
1909	1	(Z)	(Z)	1	7	118	2	123	4,694	15	264	4,366	3,984	14	135	3,863
1908	1	(Z)	(Z)	1	7	99	1	105	4,314	16	253	4,008	3,634	15	125	3,524
1907	1	(Z)	(Z)	1	7	104	1	110	4,796	21	246	4,489	4,158	20	139	4,039
1906	1	(Z)	(Z)	1	10	126	2	134	4,077	17	457	3,900	3,575	17	107	3,485
1905	(Z)	(Z)	(Z)	(Z)	11	107	5	113	3,950	19	200	3,783	3,428	19	99	3,348
1904	(Z)	(Z)	(Z)	(Z)	13	100	7	106	3,539	17	175	3,362	3,084	17	90	3,011
1903	(Z)	(Z)	(Z)	(Z)	12	102	6	108	3,530	36	165	3,410	3,134	36	87	3,083
1902	(Z)	(Z)	(Z)	(Z)	13	103	5	111	2,919	27	150	2,809	2,564	27	63	2,528
1901	(Z)	(Z)	(Z)	(Z)	12	91	5	98	2,880	19	167	2,736	2,596	19	79	2,536
1900	(Z)	(Z)	(Z)	(Z)	10	87	2	95	2,630	19	162	2,471	2,369	19	81	2,307

(Z) Less than 0.5 million dollars.

TABLE A9. Production, Imports, Exports, and Consumption of Minerals in Constant 1972 Dollars, by Major Mineral Products: 1900 to 1977—Continued

(Millions of dollars)

Year	Mineral fuels--Continued															
	Oil and gas field products															
	Total				Crude petroleum				Natural gas				Natural gas liquids			
	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption
1977	15,261	10,864	358	25,020	10,036	10,508	333	19,606	3,920	197	13	4,000	1,305	159	12	1,414
1976	15,232	9,132	332	24,123	9,999	8,776	301	18,521	3,931	190	14	4,138	1,302	166	17	1,464
1975	15,554	7,535	303	22,518	10,272	7,185	270	17,023	3,961	188	15	4,049	1,321	162	18	1,446
1974	16,395	7,649	319	23,515	10,761	7,273	286	17,579	4,255	189	16	4,416	1,379	187	17	1,520
1973	17,192	7,831	333	24,467	11,293	7,412	298	18,290	4,462	204	16	4,574	1,437	215	19	1,603
1972	17,501	6,013	310	23,479	11,610	5,652	272	17,245	4,439	201	16	4,624	1,452	160	22	1,610
1971	17,457	4,988	311	22,022	11,605	4,713	276	16,038	4,431	184	17	4,536	1,421	91	18	1,448
1970	17,543	4,353	364	21,150	11,819	4,148	329	15,341	4,318	162	16	4,395	1,406	43	19	1,414
1969	16,757	4,110	337	20,551	11,332	3,943	299	14,977	4,076	143	13	4,193	1,349	24	25	1,381
1968	16,282	3,680	334	19,438	11,190	3,528	292	14,281	3,805	129	21	3,891	1,287	23	21	1,266
1967	15,592	3,216	416	18,193	10,808	3,086	378	13,389	3,579	111	20	3,649	1,205	19	18	1,155
1966	14,671	3,239	272	17,468	10,176	3,128	247	12,922	3,390	94	9	3,448	1,105	17	16	1,098
1965	13,779	3,107	256	16,625	9,573	3,006	232	12,362	3,159	90	9	3,216	1,047	11	15	1,047
1964	13,415	2,862	280	15,966	9,367	2,766	261	11,870	3,046	87	9	3,100	1,002	9	10	996
1963	13,091	2,681	279	15,498	9,253	2,597	261	11,626	2,889	79	9	2,933	949	5	9	939
1962	12,598	2,630	231	14,948	8,995	2,547	214	11,279	2,718	79	9	2,772	885	4	8	897
1961	12,269	2,393	239	14,261	8,812	2,347	222	10,828	2,596	43	10	2,599	861	3	7	834
1960	11,968	2,261	275	13,987	8,654	2,228	256	10,722	2,502	30	13	2,495	812	3	6	770
1959	11,780	2 214	281	13,626	8,653	2,187	263	10,519	2,359	27	14	2,349	768	-	4	758
1958	11,109	2,115	364	13,015	8,232	2,088	338	10,160	2,161	27	20	2,152	716	-	6	703
1957	11,606	1,940	718	12,591	8,795	1,933	689	9,838	2,091	7	20	2,041	720	-	9	712
1956	11,488	1,770	546	12,466	8,796	1,768	520	9,845	1,975	2	17	1,932	717	-	9	689
1955	10,888	1,534	469	11,940	8,350	1 532	443	9,439	1,843	2	17	1,814	695	-	9	687
1954	10,119	1,293	457	10,971	7,781	1,291	428	8,689	1,711	2	20	1,674	627	-	9	608
1953	10,165	1,271	511	10,721	7,921	1,269	483	8,541	1,646	2	20	1,597	598	-	8	583
1952	9,829	1,173	546	10,253	7,696	1,172	520	8,178	1,570	1	17	1,520	563	-	9	555
1951	9,538	1,037	545	9,855	7,554	1,036	509	7,936	1,461	1	27	1,407	523	-	9	512
1950	8,333	1,044	403	9,035	6,634	1,043	368	7,383	1,230	1	29	1,190	469	-	6	462
1949	7,669	807	385	8,078	6,193	807	339	6,674	1,067	(Z)	29	1,016	409	-	17	388
1948	8,186	639	441	8,018	6,791	639	396	6,686	1,013	(Z)	30	969	382	-	15	363
1947	7,489	551	538	7,523	6,242	551	490	6,323	902	(Z)	29	872	345	-	19	328
1946	6,955	489	506	6,891	5,828	489	468	5,705	818	(Z)	26	791	309	-	12	395
1945	6,851	448	609	6,731	5,760	448	588	5,666	797	(Z)	17	775	294	-	4	290
1944	6,658	343	689	6,344	5,641	343	669	5,335	752	(Z)	17	747	265	-	3	262
1943	5,989	223	498	5,768	5,062	223	483	4,851	692	(Z)	13	684	235	-	2	233
1942	5,505	135	387	5,421	4,661	135	369	4,610	619	(Z)	14	591	225	-	4	220
1941	5,501	338	356	5,526	4,714	338	332	4,753	569	(Z)	20	555	218	-	4	218
1940	5,273	283	431	4,993	4,549	283	402	4,307	539	(Z)	23	511	185	-	6	175
1939	4,918	208	642	4,630	4,252	208	603	3,997	500	(Z)	27	478	166	-	12	155
1938	4,710	182	653	4,229	4,083	182	612	3,643	464	(Z)	23	431	163	-	18	155
1937	4,941	196	588	4,394	4,300	196	551	3,795	487	(Z)	26	458	154	-	11	141
1936	4,268	194	447	4,098	3,696	194	418	3,549	438	(Z)	23	422	134	-	6	127
1935	3,860	185	437	3,686	3,351	185	412	3,195	388	(Z)	20	374	121	-	5	117
1934	3,522	171	387	3,431	3,052	171	365	2,988	358	(Z)	17	338	112	-	5	105
1933	3,461	152	366	3,220	3,044	152	340	2,815	315	(Z)	21	308	102	-	5	97
1932	3,064	250	348	3,075	2,641	250	333	2,665	314	(Z)	14	303	109	-	1	107
1931	3,332	290	416	3,351	2,862	290	403	2,898	338	(Z)	13	322	132	-	(Z)	131
1930	3,568	356	517	3,303	3,020	356	504	2,786	391	(Z)	13	360	157	-	(Z)	157
1929	3,930	365	543	3,509	3,387	365	530	2,994	385	(Z)	13	361	158	-	(Z)	154
1928	3,469	297	515	3,177	3,030	297	505	2,744	310	(Z)	10	304	129	-	(Z)	129
1927	3,431	242	466	2,953	3,030	242	457	2,557	284	(Z)	9	280	117	-	(Z)	116
1926	2,946	274	431	2,871	2,591	274	425	2,523	258	(Z)	6	251	97	-	(Z)	97
1925	2,882	264	373	2,732	2,568	264	366	2,425	234	(Z)	7	227	80	-	(Z)	80
1924	2,691	318	386	2,530	2,399	318	380	2,253	226	(Z)	6	211	66	-	(Z)	66
1923	2,717	336	330	2,443	2,462	336	324	2,198	198	(Z)	6	188	57	-	(Z)	57
1922	2,060	458	241	2,000	1,874	458	239	1,816	150	(Z)	2	148	36	-	(Z)	36
1921	1,751	433	228	1,745	1,588	433	227	1,584	131	(Z)	1	129	32	-	(Z)	32
1920	1,673	366	254	1,754	1,489	366	252	1,571	157	(Z)	2	156	27	-	(Z)	27
1919	1,444	182	204	1,406	1,272	182	202	1,236	147	(Z)	2	145	25	-	(Z)	25
1918	1,358	131	222	1,201	1,197	131	221	1,040	141	(Z)	1	141	20	-	(Z)	20
1917	1,299	107	217	1,247	1,128	107	216	1,076	156	(Z)	1	156	15	-	(Z)	15
1916	1,167	70	215	1,045	1,011	70	214	889	148	(Z)	1	148	8	-	(Z)	8
1915	1,074	63	193	929	945	63	192	800	124	(Z)	1	124	5	-	(Z)	5
1914	1,013	53	183	822	893	53	182	702	117	(Z)	1	117	3	-	(Z)	3
1913	950	40	174	816	834	40	173	701	114	(Z)	1	113	2	-	(Z)	2
1912	860	19	156	772	748	19	155	661	111	(Z)	1	110	1	-	(Z)	1
1911	842	6	145	681	741	6	144	582	100	(Z)	1	98	1	-	(Z)	1
1910	805	1	123	632	705	1	122	534	100	(Z)	1	98	-	-	-	-
1909	710	1	129	503	616	1	128	410	94	(Z)	1	93	-	-	-	-
1908	680	1	128	484	601	1	127	407	79	(Z)	1	77	-	-	-	-
1907	638	1	107	450	558	1	106	371	80	(Z)	1	79	-	-	-	-
1906	502	(Z)	104	415	425	(Z)	103	339	77	(Z)	1	76	-	-	-	-
1905	522	(Z)	101	435	452	(Z)	100	367	70	(Z)	1	68	-	-	-	-
1904	455	(Z)	85	351	394	(Z)	85	290	61	(Z)	(Z)	61	-	-	-	-
1903	396	(Z)	78	327	337	(Z)	78	268	59	(Z)	(Z)	59	-	-	-	-
1902	355	(Z)	87	281	299	(Z)	87	225	56	(Z)	(Z)	56	-	-	-	-
1901	284	(Z)	88	200	232	(Z)	88	148	52	(Z)	(Z)	52	-	-	-	-
1900	261	(Z)	81	164	214	(Z)	81	117	47	(Z)	(Z)	47	-	-	-	-

Z Less than 0.5 million dollars.

TABLE A9. Production, Imports, Exports, and Consumption of Minerals in Constant 1972 Dollars, by Major Mineral Products: 1900 to 1977—Continued

(Millions of dollars)

Year	Construction materials															
	Total				Dimension stone				Crushed and broken stone				Sand and gravel			
	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption
1977	3,117	152	37	3,236	86	45	3	128	1,610	11	7	1,615	1,219	2	12	1,209
1976	2,950	134	38	3,049	81	28	4	105	1,505	11	7	1,509	1,163	-	13	1,152
1975	2,816	126	37	2,916	83	29	4	108	1,508	12	9	1,513	1,036	-	11	1,026
1974	3,271	173	33	3,417	106	41	5	142	1,757	16	6	1,765	1,185	-	7	1,180
1973	3,405	172	28	3,547	93	35	3	125	1,783	17	5	1,798	1,287	1	6	1,283
1972	3,075	159	25	3,205	91	32	4	119	1,560	14	5	1,568	1,202	1	5	1,197
1971	2,970	139	24	3,087	94	26	4	116	1,470	11	4	1,479	1,197	1	5	1,193
1970	3,019	136	22	3,130	92	27	4	115	1,458	10	4	1,464	1,232	1	3	1,230
1969	3,041	139	23	3,157	112	27	4	135	1,456	9	3	1,463	1,219	1	2	1,218
1968	2,946	141	20	3,066	119	27	4	142	1,378	8	3	1,382	1,188	1	2	1,187
1967	2,855	119	25	2,949	112	20	4	128	1,315	7	3	1,318	1,172	1	4	1,170
1966	2,838	134	19	3,070	123	22	(Z)	145	1,242	8	3	1,365	1,205	1	2	1,203
1965	2,891	141	17	3,016	144	28	1	171	1,305	7	2	1,312	1,175	1	2	1,174
1964	2,735	145	15	2,864	151	29	2	178	1,212	6	2	1,215	1,119	1	2	1,118
1963	2,582	131	11	2,701	153	27	2	178	1,154	6	1	1,158	1,034	1	2	1,033
1962	2,495	130	7	2,617	162	26	2	186	1,096	6	1	1,100	1,004	1	1	1,004
1961	2,363	113	10	2,465	142	20	2	160	1,022	5	2	1,024	968	(Z)	1	967
1960	2,315	117	12	2,419	132	15	2	145	1,024	5	2	1,025	916	1	4	914
1959	2,291	122	6	2,408	142	14	(Z)	156	954	3	2	956	940	(Z)	1	939
1958	2,142	105	5	2,241	140	14	(Z)	154	894	2	1	894	879	(Z)	1	878
1957	2,083	111	7	2,184	137	14	(Z)	151	885	2	2	882	817	(Z)	1	816
1956	2,043	110	7	2,145	137	12	1	148	817	2	2	816	825	(Z)	1	824
1955	1,915	108	8	2,015	147	8	1	154	762	2	2	762	768	(Z)	1	767
1954	1,719	98	5	1,814	137	8	1	144	661	1	1	663	719	(Z)	1	718
1953	1,521	100	6	1,613	118	8	1	125	647	1	2	644	570	(Z)	1	569
1952	1,495	99	7	1,588	114	6	1	119	629	1	2	629	562	(Z)	1	561
1951	1,435	106	6	1,534	116	6	1	121	604	1	1	603	519	(Z)	(Z)	519
1950	1,302	99	5	1,396	116	6	1	121	537	1	1	537	479	(Z)	(Z)	479
1949	1,147	70	5	1,211	102	1	1	102	477	1	1	476	422	(Z)	(Z)	422
1948	1,179	86	6	1,259	109	1	1	109	484	1	2	483	423	(Z)	(Z)	423
1947	1,069	79	7	1,139	94	2	1	95	449	1	2	447	382	(Z)	(Z)	382
1946	941	57	6	994	90	(Z)	1	89	383	1	2	383	338	(Z)	(Z)	338
1945	737	43	5	775	63	(Z)	1	62	322	(Z)	2	320	260	(Z)	(Z)	260
1944	720	43	3	761	45	(Z)	1	44	326	(Z)	1	326	260	(Z)	(Z)	260
1943	833	50	3	878	52	(Z)	1	51	366	(Z)	1	363	310	(Z)	(Z)	310
1942	1,023	48	4	1,068	87	(Z)	1	86	420	(Z)	1	420	402	1	(Z)	403
1941	1,012	52	4	1,062	129	1	1	129	391	(Z)	1	391	380	(Z)	(Z)	380
1940	351	35	4	882	129	1	1	129	325	1	1	325	314	(Z)	(Z)	314
1939	831	35	3	863	144	1	1	144	316	1	(Z)	317	297	(Z)	(Z)	297
1938	680	26	2	704	116	1	1	116	268	1	(Z)	269	239	1	(Z)	240
1937	741	40	2	778	127	1	1	127	283	1	(Z)	283	250	(Z)	(Z)	250
1936	712	32	2	742	120	1	(Z)	121	278	1	(Z)	279	236	(Z)	(Z)	236
1935	489	20	1	508	92	(Z)	(Z)	92	179	(Z)	(Z)	179	165	(Z)	(Z)	165
1934	485	14	1	499	90	(Z)	(Z)	90	198	(Z)	(Z)	198	155	(Z)	(Z)	155
1933	427	14	(Z)	441	94	(Z)	(Z)	94	153	(Z)	(Z)	153	143	(Z)	(Z)	143
1932	473	10	(Z)	484	122	1	(Z)	123	156	(Z)	(Z)	157	157	(Z)	(Z)	157
1931	656	20	1	675	182	2	1	183	220	(Z)	(Z)	220	202	(Z)	(Z)	202
1930	888	37	2	922	267	6	2	271	279	1	(Z)	279	259	2	(Z)	261
1929	1,025	43	2	1,068	306	6	2	310	311	1	(Z)	312	293	2	(Z)	296
1928	963	40	3	1,000	297	6	2	301	300	1	(Z)	300	274	1	1	274
1927	962	40	2	1,001	304	6	2	308	303	1	(Z)	304	259	1	(Z)	260
1926	911	41	2	949	289	6	2	293	280	1	(Z)	280	242	1	(Z)	243
1925	893	37	2	928	306	6	2	310	263	1	(Z)	263	227	1	(Z)	228
1924	812	32	2	842	282	6	2	286	237	1	(Z)	237	206	1	(Z)	208
1923	781	33	3	812	276	6	2	280	233	1	(Z)	235	185	(Z)	1	184
1922	599	23	5	619	224	4	5	223	185	(Z)	(Z)	187	124	(Z)	(Z)	124
1921	497	12	5	502	192	2	5	189	148	(Z)	(Z)	146	105	1	(Z)	106
1920	546	23	8	559	194	2	7	189	179	(Z)	1	176	109	1	(Z)	110
1919	477	19	6	491	184	2	5	181	146	(Z)	1	146	93	1	(Z)	94
1918	426	17	7	436	144	1	5	140	151	(Z)	1	150	81	(Z)	1	80
1917	574	18	6	585	219	2	5	216	182	(Z)	1	180	106	(Z)	(Z)	106
1916	681	15	3	694	297	2	2	297	193	(Z)	1	193	117	(Z)	(Z)	117
1915	610	11	3	618	260	2	2	260	184	(Z)	1	183	100	(Z)	(Z)	100
1914	656	14	8	662	309	2	7	304	176	(Z)	1	175	105	(Z)	(Z)	105
1913	692	18	12	696	317	4	11	310	196	(Z)	1	193	105	1	(Z)	106
1912	667	16	6	678	326	5	5	326	177	(Z)	1	177	91	(Z)	(Z)	91
1911	707	15	6	716	378	6	5	379	169	(Z)	1	168	88	(Z)	(Z)	88
1910	695	15	3	707	361	6	2	365	165	(Z)	1	164	92	(Z)	(Z)	92
1909	690	13	2	701	389	4	2	391	143	(Z)	(Z)	143	80	(Z)	(Z)	80
1908	596	11	2	606	369	2	2	369	116	1	(Z)	117	49	(Z)	(Z)	49
1907	621	16	2	637	363	6	2	367	130	1	(Z)	132	55	(Z)	(Z)	55
1906	629	11	5	636	398	4	5	397	118	(Z)	(Z)	118	43	(Z)	(Z)	43
1905	605	10	5	610	398	4	5	397	110	(Z)	(Z)	110	30	(Z)	(Z)	30
1904	549	9	7	551	361	2	7	356	92	1	(Z)	93	38	(Z)	(Z)	38
1903	555	9	11	553	374	2	11	365	86	1	(Z)	87	35	(Z)	(Z)	35
1902	575	8	8	575	409	2	8	403	81	(Z)	(Z)	81	29	(Z)	(Z)	29
1901	491	8	15	484	349	2	15	336	65	1	(Z)	66	24	(Z)	(Z)	24
1900	490	7	13	485	371	1	13	359	51	1	(Z)	53	21	(Z)	(Z)	21

(Z) Less than 0.5 million dollars.

TABLE A9. Production, Imports, Exports, and Consumption of Minerals in Constant 1972 Dollars, by Major Mineral Products: 1900 to 1977—Continued

(Millions of dollars)

Year	Construction materials--Continued															
	Fire clay				Common clay and shale				Gypsum				Other construction materials			
	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production[1]	Imports	Exports	Consumption[1]
1977	24	(Z)	3	22	56	(Z)	(Z)	56	55	28	1	82	67	66	11	124
1976	27	(Z)	2	25	55	(Z)	(Z)	55	47	25	1	70	72	70	11	133
1975	27	(Z)	2	25	53	(Z)	(Z)	53	38	21	(Z)	67	71	64	11	124
1974	34	(Z)	2	32	67	(Z)	(Z)	67	47	29	1	79	75	87	12	152
1973	33	(Z)	2	32	73	(Z)	(Z)	73	53	30	(Z)	81	83	89	12	155
1972	29	(Z)	1	28	69	(Z)	(Z)	69	48	30	(Z)	76	76	82	10	148
1971	25	(Z)	1	23	66	(Z)	(Z)	66	41	24	(Z)	67	77	77	10	143
1970	53	(Z)	1	51	59	(Z)	(Z)	59	37	24	(Z)	59	88	74	10	152
1969	59	(Z)	2	57	63	(Z)	(Z)	63	39	23	(Z)	61	93	79	12	160
1968	66	(Z)	1	65	62	(Z)	(Z)	62	40	21	(Z)	61	93	84	10	167
1967	65	(Z)	2	63	58	(Z)	(Z)	58	37	18	(Z)	55	96	73	12	157
1966	71	(Z)	2	69	60	(Z)	(Z)	60	38	21	(Z)	59	99	82	12	169
1965	74	(Z)	2	72	58	(Z)	(Z)	58	40	24	(Z)	63	95	81	10	166
1964	69	(Z)	1	68	57	(Z)	(Z)	57	42	25	(Z)	67	85	84	8	161
1963	68	(Z)	2	66	54	(Z)	(Z)	54	41	21	(Z)	62	78	76	4	150
1962	66	(Z)	1	65	51	(Z)	(Z)	51	39	21	(Z)	60	77	76	2	151
1961	71	(Z)	2	69	50	(Z)	(Z)	50	38	19	(Z)	57	72	69	3	138
1960	80	(Z)	1	79	51	(Z)	(Z)	51	39	20	(Z)	59	73	76	3	146
1959	80	(Z)	1	79	52	(Z)	(Z)	52	43	24	(Z)	67	80	81	2	159
1958	72	(Z)	1	71	46	(Z)	(Z)	46	38	16	(Z)	54	73	73	2	144
1957	88	(Z)	2	86	46	(Z)	(Z)	46	37	17	(Z)	54	73	78	2	149
1956	97	(Z)	1	96	51	(Z)	(Z)	51	41	17	(Z)	58	75	79	2	152
1955	88	(Z)	2	86	51	(Z)	(Z)	51	42	16	(Z)	58	57	82	2	137
1954	72	(Z)	(Z)	72	44	(Z)	(Z)	44	35	13	(Z)	48	51	76	2	125
1953	85	(Z)	(Z)	85	42	(Z)	(Z)	42	33	13	(Z)	46	26	78	2	102
1952	91	(Z)	(Z)	91	40	(Z)	(Z)	40	33	12	(Z)	45	26	80	3	103
1951	97	(Z)	1	96	41	(Z)	(Z)	41	34	13	(Z)	47	24	86	3	107
1950	77	(Z)	(Z)	77	40	(Z)	(Z)	40	33	13	(Z)	46	20	79	3	96
1949	69	(Z)	(Z)	69	31	(Z)	(Z)	31	26	11	(Z)	37	20	57	3	74
1948	80	(Z)	1	79	38	(Z)	(Z)	38	29	12	(Z)	41	16	72	2	86
1947	74	(Z)	2	72	32	(Z)	(Z)	32	25	10	(Z)	34	13	66	2	77
1946	65	(Z)	(Z)	65	31	(Z)	(Z)	31	23	5	(Z)	28	11	51	3	59
1945	51	(Z)	(Z)	51	16	(Z)	(Z)	16	14	2	(Z)	16	11	41	2	50
1944	51	(Z)	(Z)	51	13	(Z)	(Z)	13	14	1	(Z)	15	11	42	1	52
1943	63	(Z)	(Z)	63	15	(Z)	(Z)	15	16	1	(Z)	17	11	49	1	59
1942	66	(Z)	1	65	19	(Z)	(Z)	19	18	1	(Z)	19	11	46	1	56
1941	57	(Z)	(Z)	57	26	(Z)	(Z)	26	18	5	(Z)	24	11	46	2	55
1940	37	(Z)	(Z)	37	22	(Z)	(Z)	22	14	5	(Z)	19	10	28	2	36
1939	31	(Z)	(Z)	31	23	(Z)	(Z)	23	13	5	(Z)	18	7	28	2	33
1938	23	(Z)	(Z)	23	16	(Z)	(Z)	16	11	2	(Z)	13	7	21	1	27
1937	42	(Z)	(Z)	42	19	(Z)	(Z)	19	12	4	(Z)	16	8	34	1	41
1936	42	(Z)	(Z)	42	17	(Z)	(Z)	17	11	2	(Z)	13	8	28	2	34
1935	29	(Z)	(Z)	29	11	(Z)	(Z)	11	8	1	(Z)	9	5	19	1	23
1934	23	(Z)	(Z)	23	8	(Z)	(Z)	8	6	1	(Z)	8	5	13	1	17
1933	23	(Z)	(Z)	23	6	(Z)	(Z)	6	5	1	(Z)	6	3	13	(Z)	16
1932	22	(Z)	(Z)	22	8	(Z)	(Z)	8	5	1	(Z)	6	3	8	(Z)	11
1931	20	(Z)	(Z)	20	16	(Z)	(Z)	16	11	2	(Z)	13	5	16	(Z)	21
1930	37	(Z)	(Z)	37	25	(Z)	(Z)	25	13	4	(Z)	17	8	24	(Z)	32
1929	52	(Z)	(Z)	52	36	(Z)	(Z)	36	19	4	(Z)	24	8	30	(Z)	38
1928	23	(Z)	(Z)	23	42	(Z)	(Z)	42	19	4	(Z)	24	8	28	(Z)	36
1927	23	(Z)	(Z)	23	44	(Z)	(Z)	44	21	4	(Z)	26	8	28	(Z)	36
1926	23	(Z)	(Z)	23	47	(Z)	(Z)	47	23	4	(Z)	27	7	29	(Z)	36
1925	22	(Z)	(Z)	22	47	(Z)	(Z)	47	23	2	(Z)	25	5	28	(Z)	33
1924	20	(Z)	(Z)	20	43	(Z)	(Z)	43	19	2	(Z)	21	5	22	(Z)	27
1923	20	(Z)	(Z)	20	44	(Z)	(Z)	44	18	1	(Z)	19	5	25	(Z)	30
1922	14	(Z)	(Z)	14	35	(Z)	(Z)	35	14	1	(Z)	15	3	18	(Z)	21
1921	11	(Z)	(Z)	11	27	(Z)	(Z)	27	12	1	(Z)	13	2	8	(Z)	10
1920	20	(Z)	(Z)	20	27	(Z)	(Z)	27	12	1	(Z)	13	5	19	(Z)	24
1919	14	(Z)	(Z)	14	27	(Z)	(Z)	27	10	1	(Z)	11	3	15	(Z)	18
1918	20	(Z)	(Z)	20	19	(Z)	(Z)	19	8	(Z)	(Z)	8	3	16	(Z)	19
1917	20	(Z)	(Z)	20	33	(Z)	(Z)	33	11	1	(Z)	12	3	15	(Z)	18
1916	18	(Z)	(Z)	18	42	(Z)	(Z)	42	11	1	(Z)	12	3	12	(Z)	15
1915	14	(Z)	(Z)	14	40	(Z)	(Z)	40	10	1	(Z)	11	2	8	(Z)	10
1914	14	(Z)	(Z)	14	40	(Z)	(Z)	40	10	1	(Z)	11	2	11	(Z)	13
1913	18	(Z)	(Z)	18	44	(Z)	(Z)	44	11	1	(Z)	12	1	12	(Z)	13
1912	15	(Z)	(Z)	15	46	(Z)	(Z)	46	11	1	(Z)	12	1	10	(Z)	11
1911	14	(Z)	(Z)	14	46	(Z)	(Z)	46	10	1	(Z)	11	2	8	(Z)	10
1910	15	(Z)	(Z)	15	50	(Z)	(Z)	50	10	1	(Z)	11	2	8	(Z)	10
1909	14	(Z)	(Z)	14	52	(Z)	(Z)	52	10	1	(Z)	11	2	8	(Z)	10
1908	12	(Z)	(Z)	12	42	(Z)	(Z)	42	6	1	(Z)	8	2	7	(Z)	9
1907	14	(Z)	(Z)	14	51	(Z)	(Z)	51	6	1	(Z)	8	2	8	(Z)	10
1906	12	(Z)	(Z)	12	51	(Z)	(Z)	51	6	1	(Z)	8	1	6	(Z)	7
1905	11	(Z)	(Z)	11	50	(Z)	(Z)	50	4	1	(Z)	5	2	5	(Z)	7
1904	9	(Z)	(Z)	9	44	(Z)	(Z)	44	4	1	(Z)	5	1	5	(Z)	6
1903	11	(Z)	(Z)	11	43	(Z)	(Z)	43	4	1	(Z)	5	2	5	(Z)	7
1902	9	(Z)	(Z)	9	43	(Z)	(Z)	43	2	1	(Z)	3	2	5	(Z)	7
1901	9	(Z)	(Z)	9	41	(Z)	(Z)	41	2	1	(Z)	3	1	4	(Z)	5
1900	8	(Z)	(Z)	8	36	(Z)	(Z)	36	2	1	(Z)	3	1	4	(Z)	5

Z Less than 0.5 million dollars.

[1]Prior to 1954 excludes shell, which amounted to $17 million in 1954.

TABLE A9. Production, Imports, Exports, and Consumption of Minerals in Constant 1972 Dollars, by Major Mineral Products: 1900 to 1977—Continued

(Millions of dollars)

Year	Other nonmetallic minerals															
	Total				Potash				Phosphate rock				Sulfur and pyrites			
	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption
1977	1,722	667	356	2,063	93	208	40	270	260	4	105	165	188	38	20	211
1976	1,662	575	316	1,901	96	184	38	247	245	2	81	139	191	33	23	193
1975	1,572	499	323	1,730	100	152	31	205	243	3	93	138	201	36	25	190
1974	1,650	579	362	1,888	102	174	32	244	228	4	95	151	204	41	48	196
1973	1,579	526	312	1,834	104	144	36	223	212	4	91	136	195	23	32	184
1972	1,498	476	288	1,713	107	119	31	193	208	3	91	128	182	22	33	177
1971	1,409	432	252	1,591	104	111	23	193	197	4	79	128	171	26	28	164
1970	1,421	428	249	1,583	109	105	22	190	194	4	72	123	170	31	26	166
1969	1,467	428	257	1,642	113	94	29	190	189	3	73	119	170	32	28	162
1968	1,411	413	254	1,544	109	87	30	173	208	2	82	108	174	29	29	159
1967	1,365	371	223	1,525	132	69	28	166	202	3	68	138	163	27	39	165
1966	1,349	372	215	1,498	133	60	25	161	196	3	61	121	163	28	43	161
1965	1,222	315	192	1,348	126	44	26	136	148	2	48	101	147	27	47	140
1964	1,118	282	190	1,217	117	30	25	128	131	2	43	87	127	27	35	126
1963	1,000	250	157	1,089	114	24	18	113	113	2	34	80	119	26	29	120
1962	961	242	142	1,066	98	14	20	103	109	2	30	80	121	22	28	113
1961	921	235	136	987	109	10	19	92	105	2	29	74	128	18	29	98
1960	896	214	137	973	106	9	20	94	99	2	30	69	119	16	32	106
1959	863	226	116	993	96	10	14	96	89	2	23	68	111	14	29	107
1958	778	175	103	861	85	8	11	90	84	2	20	66	110	13	29	93
1957	834	209	112	917	92	8	10	84	79	2	23	61	125	10	29	97
1956	862	201	108	925	87	8	9	83	90	2	20	62	140	5	30	102
1955	790	176	92	876	83	8	5	83	71	2	16	61	126	2	29	99
1954	742	145	83	802	78	4	3	79	79	2	17	60	120	1	30	87
1953	713	153	66	800	77	5	3	73	73	2	14	60	112	2	23	92
1952	676	145	61	742	67	8	3	69	70	2	10	58	113	3	25	86
1951	664	154	72	741	57	13	4	67	62	2	12	54	111	2	24	86
1950	592	145	65	677	52	9	3	58	65	2	13	48	107	2	27	90
1949	525	99	62	563	45	1	4	43	53	1	9	46	96	1	27	72
1948	555	113	58	609	47	1	4	44	51	1	8	39	99	1	24	79
1947	534	79	58	565	41	1	4	40	52	1	5	48	91	2	25	75
1946	490	84	50	523	38	(Z)	4	34	40	1	5	34	102	2	22	86
1945	455	98	42	516	35	(Z)	4	33	34	1	4	34	78	2	18	63
1944	459	98	36	523	33	(Z)	4	29	31	1	4	30	69	2	13	64
1943	442	123	34	548	30	1	4	28	30	(Z)	4	27	57	2	13	59
1942	405	101	30	484	26	(Z)	3	25	27	(Z)	4	24	72	3	11	66
1941	375	82	37	421	21	1	3	20	27	(Z)	6	20	65	4	14	61
1940	299	68	34	327	15	5	3	19	24	(Z)	5	18	57	4	14	43
1939	255	57	35	283	13	4	4	16	22	(Z)	6	14	45	4	12	40
1938	231	50	35	230	13	8	3	18	22	(Z)	8	14	49	3	11	27
1937	269	79	37	304	11	14	3	23	23	(Z)	6	16	56	4	13	43
1936	236	59	33	262	10	9	3	15	20	(Z)	8	12	43	4	11	36
1935	196	50	30	217	8	10	3	16	18	(Z)	8	10	36	4	8	31
1934	173	39	28	188	5	6	1	10	17	(Z)	6	10	31	3	10	27
1933	159	35	26	174	5	6	1	11	14	(Z)	5	10	30	3	10	27
1932	125	24	18	125	3	4	(Z)	5	8	(Z)	4	4	20	2	6	11
1931	184	40	25	199	3	9	1	10	14	(Z)	6	8	44	3	8	39
1930	223	55	30	243	3	14	(Z)	16	23	(Z)	8	14	53	3	11	45
1929	228	66	36	259	3	13	(Z)	16	22	(Z)	8	14	49	4	16	38
1928	210	57	26	240	3	13	(Z)	16	20	(Z)	5	14	43	4	13	34
1927	199	51	27	222	3	10	(Z)	12	18	(Z)	5	14	44	2	15	31
1926	196	60	22	231	1	11	(Z)	11	19	(Z)	5	13	40	3	11	32
1925	185	50	23	213	1	11	(Z)	11	20	(Z)	5	16	31	2	11	22
1924	170	54	19	202	1	9	(Z)	10	17	(Z)	5	11	27	2	9	20
1923	184	51	20	217	1	9	(Z)	10	17	(Z)	5	13	41	2	9	35
1922	157	40	17	182	(Z)	9	(Z)	9	14	(Z)	5	12	36	2	9	29
1921	117	25	14	125	(Z)	4	(Z)	4	12	(Z)	5	5	37	2	5	34
1920	175	46	21	200	3	9	(Z)	12	24	(Z)	6	17	29	3	9	24
1919	143	36	11	171	1	3	(Z)	4	14	(Z)	3	14	27	4	4	27
1918	167	24	8	183	3	(Z)	(Z)	3	14	(Z)	1	13	34	4	2	36
1917	161	35	8	186	1	(Z)	(Z)	1	16	(Z)	1	14	29	8	3	34
1916	132	39	7	162	(Z)	(Z)	(Z)	(Z)	12	(Z)	2	9	20	11	2	28
1915	105	34	5	132	(Z)	3	(Z)	3	11	(Z)	2	8	16	9	1	23
1914	98	42	11	128	(Z)	9	(Z)	9	16	(Z)	5	10	13	9	2	20
1913	108	51	13	147	(Z)	11	(Z)	11	18	(Z)	8	10	14	7	2	20
1912	99	50	13	137	(Z)	11	(Z)	11	17	(Z)	8	10	11	9	2	18
1911	93	48	13	129	(Z)	11	(Z)	11	18	(Z)	8	11	8	9	1	16
1910	93	49	9	132	(Z)	11	(Z)	11	16	(Z)	6	9	8	7	1	14
1909	87	42	9	120	(Z)	8	(Z)	8	14	(Z)	6	8	9	6	1	14
1908	77	28	10	95	(Z)	5	(Z)	5	14	(Z)	8	6	10	6	1	15
1907	85	40	9	116	(Z)	5	(Z)	5	14	(Z)	6	8	6	6	1	11
1906	85	46	7	123	(Z)	6	(Z)	6	12	(Z)	5	6	9	6	(Z)	15
1905	77	35	7	104	(Z)	5	(Z)	5	11	(Z)	5	5	7	6	(Z)	13
1904	66	33	7	91	(Z)	5	(Z)	5	11	1	5	6	4	6	(Z)	10
1903	60	38	6	92	(Z)	5	(Z)	5	9	1	5	5	3	7	-	10
1902	59	39	6	93	(Z)	5	(Z)	5	8	1	5	5	2	7	(Z)	9
1901	60	36	6	91	(Z)	4	(Z)	4	8	1	5	5	3	6	-	9
1900	56	33	5	84	(Z)	4	(Z)	4	8	1	4	5	2	6	(Z)	8

(Z) Less than 0.5 million dollars.

TABLE A9. Production, Imports, Exports, and Consumption of Minerals in Constant 1972 Dollars, by Major Mineral Products: 1900 to 1977—Continued

(Millions of dollars)

Year	Other nonmetallic minerals--Continued															
	Sodium chloride				Other chemical and fertilizer materials				Abrasive materials				Other nonmetallic minerals			
	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption	Production	Imports	Exports	Consumption
1977	283	32	11	304	498	131	39	595	13	79	69	31	387	175	72	487
1976	291	30	13	309	453	121	35	539	13	59	58	21	373	146	68	453
1975	270	22	15	293	416	119	36	507	14	51	53	22	328	116	70	375
1974	307	23	12	318	425	148	36	528	14	67	60	35	370	122	79	416
1973	289	22	12	300	417	134	33	524	12	69	44	49	350	130	64	418
1972	297	24	15	306	375	125	23	481	12	54	36	40	317	129	59	388
1971	291	26	13	304	345	117	23	435	10	47	32	24	291	101	54	343
1970	303	24	10	316	343	119	24	436	10	48	33	27	292	97	62	325
1969	292	23	12	303	399	120	23	499	12	51	38	25	292	105	54	344
1968	272	24	12	284	360	117	19	460	12	51	30	33	276	103	52	327
1967	257	19	11	265	342	100	16	429	12	61	22	51	257	92	39	311
1966	240	17	11	246	344	105	20	432	12	69	18	63	261	90	37	314
1965	229	17	12	234	323	94	14	403	12	47	16	43	237	84	29	291
1964	208	16	11	213	294	80	36	333	11	52	12	51	230	75	28	279
1963	202	11	12	201	260	69	29	299	10	43	12	41	182	75	23	235
1962	190	10	11	189	240	78	24	292	9	46	9	46	194	70	20	243
1961	169	8	11	166	217	68	22	260	9	52	7	54	184	77	14	243
1960	168	8	8	168	213	68	25	255	9	49	6	52	182	62	16	229
1959	166	8	8	166	214	68	22	264	9	50	4	55	178	74	16	237
1958	144	5	5	144	188	51	23	218	8	37	3	42	159	59	12	208
1957	157	5	7	155	211	77	20	265	8	48	12	44	162	59	11	211
1956	160	3	5	158	213	60	23	245	8	62	10	60	164	61	11	215
1955	150	2	4	148	194	45	20	221	8	56	9	55	158	61	9	209
1954	136	1	4	133	176	37	14	203	8	53	7	54	145	47	8	186
1953	137	1	4	134	168	40	8	204	6	52	8	50	140	51	6	187
1952	129	1	3	127	158	31	8	173	5	52	5	52	134	48	7	177
1951	133	1	3	131	159	20	15	164	6	48	7	47	136	68	7	192
1950	110	(Z)	3	107	130	20	7	144	5	44	6	43	123	68	6	187
1949	103	(Z)	3	100	119	17	8	128	4	24	6	22	105	53	5	152
1948	108	(Z)	2	106	131	17	10	136	5	41	4	42	114	52	6	163
1947	106	(Z)	2	104	133	20	10	143	5	18	6	17	106	37	6	138
1946	100	(Z)	2	98	105	11	7	110	4	20	4	20	101	50	6	141
1945	101	(Z)	1	100	117	18	8	125	4	41	4	41	86	36	3	120
1944	104	(Z)	1	103	136	20	7	142	2	47	4	45	84	28	3	110
1943	100	(Z)	1	99	130	22	7	142	4	45	2	47	91	53	3	140
1942	90	(Z)	1	89	104	18	6	118	4	41	2	43	82	39	3	119
1941	84	(Z)	1	83	89	12	5	96	4	26	3	27	85	39	5	114
1940	68	(Z)	1	67	72	12	5	78	2	15	3	14	61	32	3	88
1939	61	(Z)	1	60	59	12	6	65	2	14	3	13	53	23	3	75
1938	53	(Z)	1	52	46	14	4	55	1	8	3	6	47	17	5	58
1937	61	(Z)	1	60	57	20	6	71	2	9	3	8	59	32	5	83
1936	58	(Z)	1	57	50	14	5	59	2	7	2	7	53	25	3	76
1935	52	(Z)	1	51	39	11	5	46	2	5	2	5	41	20	3	58
1934	50	(Z)	(Z)	50	32	12	5	40	1	3	2	2	37	15	3	49
1933	50	(Z)	(Z)	50	25	11	5	31	2	2	2	2	33	13	3	43
1932	42	(Z)	(Z)	42	20	8	5	24	1	1	(Z)	2	31	9	3	37
1931	49	(Z)	(Z)	49	29	11	5	36	1	2	(Z)	3	44	15	5	54
1930	53	(Z)	(Z)	53	32	14	5	38	2	3	1	4	57	21	5	73
1929	56	(Z)	(Z)	56	36	17	5	48	5	3	1	7	57	29	6	80
1928	53	(Z)	(Z)	53	30	14	4	40	5	2	1	6	56	24	3	77
1927	50	(Z)	(Z)	50	27	14	4	36	5	2	1	6	52	23	2	73
1926	49	(Z)	(Z)	49	27	14	3	37	5	3	1	7	55	29	2	82
1925	49	(Z)	(Z)	49	23	9	4	29	5	4	1	8	56	24	2	78
1924	45	(Z)	(Z)	45	24	14	3	33	5	2	1	6	51	27	1	77
1923	47	(Z)	(Z)	47	24	9	3	30	5	3	1	7	49	28	2	75
1922	45	(Z)	(Z)	45	19	6	2	22	4	2	(Z)	6	39	21	1	59
1921	33	(Z)	(Z)	33	7	5	2	9	4	1	1	4	24	13	1	36
1920	45	(Z)	(Z)	45	30	8	3	35	8	3	1	10	36	23	2	57
1919	45	(Z)	(Z)	45	21	5	2	24	5	2	1	6	30	22	1	51
1918	48	(Z)	(Z)	48	29	3	3	29	8	2	1	9	31	15	1	45
1917	46	(Z)	(Z)	46	30	5	2	32	8	2	1	9	31	20	1	50
1916	42	(Z)	(Z)	42	24	6	1	29	6	2	1	7	28	20	1	47
1915	35	(Z)	(Z)	35	15	5	1	19	5	2	1	6	23	15	(Z)	38
1914	32	(Z)	(Z)	32	10	6	1	15	5	3	1	7	22	15	2	35
1913	32	(Z)	(Z)	32	12	8	1	19	6	2	1	7	26	23	1	48
1912	31	(Z)	(Z)	31	12	8	1	19	6	2	1	7	22	20	1	41
1911	29	(Z)	(Z)	29	9	8	1	16	5	2	1	6	24	18	2	40
1910	28	(Z)	(Z)	28	8	9	1	16	5	2	1	6	28	20	(Z)	48
1909	28	(Z)	(Z)	28	8	6	1	13	5	2	1	6	23	20	-	43
1908	27	(Z)	(Z)	27	5	6	(Z)	11	4	2	1	5	17	9	-	26
1907	27	(Z)	(Z)	27	9	9	1	17	5	2	1	6	24	18	-	42
1906	26	(Z)	(Z)	26	8	9	1	16	5	2	1	6	25	23	-	48
1905	24	(Z)	(Z)	24	8	6	1	13	5	1	1	5	22	17	-	39
1904	20	(Z)	(Z)	20	8	6	1	13	6	1	1	6	17	14	-	31
1903	18	(Z)	(Z)	18	7	8	(Z)	15	5	2	1	6	18	15	-	33
1902	22	(Z)	(Z)	22	6	8	(Z)	14	5	2	1	6	16	16	-	32
1901	19	(Z)	(Z)	19	3	8	(Z)	11	5	2	1	6	22	15	-	37
1900	19	(Z)	(Z)	19	5	8	(Z)	13	5	1	1	5	17	13	-	30

Z Less than 0.5 million dollars.

TABLE A10. Primary and Secondary Production of Nonferrous Metals, Except Precious Metals and Uranium, in Constant 1972 Dollars: 1910 to 1977

(Millions of dollars. Secondary production represents old scrap only)

Year	All specified metals			Copper			Lead			Zinc			Bauxite and magnesium			Antimony, cadmium, mercury, tin, and titanium		
	Total	Primary	Secondary	Total	Primary	Secondary	Total	Primary	Secondary	Total	Primary	Secondary	Total	Primary	Secondary	Total	Primary	Secondary
1977	2,061	1,483	578	1,471	1,131	340	237	108	129	97	81	16	167	124	43	89	39	50
1976	2,064	1,537	527	1,523	1,208	315	227	112	115	102	85	17	136	97	39	76	35	41
1975	1,855	1,402	453	1,341	1,063	278	218	114	104	95	82	13	130	110	20	71	33	38
1974	2,129	1,579	550	1,565	1,201	364	233	122	111	100	87	13	141	127	14	90	42	48
1973	2,189	1,648	541	1,658	1,292	366	210	111	99	100	84	16	127	115	12	94	46	48
1972	2,118	1,609	509	1,597	1,252	345	206	114	92	97	83	14	124	113	11	94	47	47
1971	2,000	1,503	497	1,480	1,145	335	197	107	90	102	88	14	127	117	10	94	46	48
1970	2,200	1,658	542	1,672	1,293	379	198	105	93	106	93	13	119	110	9	105	57	48
1969	2,101	1,493	608	1,592	1,160	432	187	93	94	112	97	15	108	98	10	102	45	57
1968	1,773	1,204	569	1,297	905	392	153	66	87	105	92	13	104	95	9	114	46	68
1967	1,546	1,008	538	1,080	717	363	146	58	88	111	96	15	105	95	10	104	42	62
1966	1,943	1,362	581	1,476	1,074	402	150	61	89	114	99	15	93	82	11	110	46	64
1965	1,887	1,305	582	1,401	1,016	385	146	55	91	122	107	15	93	82	11	125	45	80
1964	1,747	1,220	527	1,293	938	355	139	52	87	115	103	12	90	80	10	110	47	63
1963	1,640	1,172	468	1,231	913	318	124	46	78	103	92	11	87	77	10	95	44	51
1962	1,623	1,172	451	1,237	924	313	115	43	72	99	88	11	80	70	10	92	47	45
1961	1,544	1,096	448	1,184	875	309	120	48	72	92	81	11	55	45	10	93	47	46
1960	1,496	1,032	464	1,134	811	323	122	46	76	88	76	12	59	52	7	93	47	46
1959	1,322	828	494	974	620	354	119	47	72	88	75	13	54	45	9	87	41	46
1958	1,378	938	440	1,045	736	309	111	48	63	83	71	12	48	41	7	91	42	49
1957	1,592	1,101	491	1,151	816	335	142	62	80	106	93	13	92	83	9	101	47	54
1956	1,623	1,105	518	1,182	830	352	147	65	82	106	94	12	82	73	9	106	43	63
1955	1,571	1,008	563	1,139	752	387	144	62	82	106	90	16	75	68	7	107	36	71
1954	1,344	881	463	933	628	305	139	61	78	94	82	12	82	76	6	96	34	62
1953	1,465	978	487	1,018	695	323	141	63	78	107	96	11	102	92	10	97	32	65
1952	1,497	1,017	480	1,008	695	313	148	72	76	128	116	12	114	104	10	99	30	69
1951	1,485	969	516	1,042	697	345	153	72	81	131	119	12	60	51	9	99	30	69
1950	1,466	930	536	1,049	684	365	158	80	78	120	108	12	38	29	9	101	29	72
1949	1,093	670	423	727	437	290	143	76	67	114	104	10	30	25	5	79	28	51
1948	1,150	608	542	747	368	379	152	72	80	122	110	12	35	26	9	94	32	62
1947	1,125	581	544	718	341	377	153	71	82	123	111	12	33	22	11	98	36	62
1946	919	479	440	573	268	305	125	62	63	114	101	13	23	18	5	84	30	54
1945	1,449	931	518	1,048	675	373	129	72	57	123	107	16	44	40	4	105	37	68
1944	1,453	975	478	919	576	343	130	77	53	144	125	19	155	154	1	105	43	62
1943	1,498	1,031	467	877	554	323	141	84	57	146	130	16	216	215	1	118	48	70
1942	1,386	925	461	910	589	321	149	92	57	146	134	12	69	68	1	112	42	70
1941	1,302	819	483	854	542	312	154	84	70	144	131	13	26	25	1	124	37	87
1940	879	515	364	526	274	252	126	84	42	127	116	11	11	10	1	89	31	58
1939	686	377	309	389	174	215	115	76	39	109	102	7	8	7	1	65	18	47
1938	625	336	289	357	155	202	105	68	37	97	90	7	6	5	1	60	18	42
1937	811	394	417	481	174	307	131	86	45	121	110	11	6	6	(Z)	72	18	54
1936	720	330	390	425	138	287	112	70	42	112	101	11	6	5	1	65	16	49
1935	728	354	374	454	182	272	104	61	43	100	90	10	5	4	1	65	17	48
1934	619	302	317	385	152	233	87	53	34	83	76	7	4	4	(Z)	60	17	43
1933	503	223	280	290	96	194	87	50	37	77	67	10	2	2	(Z)	47	8	39
1932	359	156	203	177	41	136	87	55	32	58	51	7	1	1	(Z)	36	8	28
1931	664	385	279	418	221	197	114	75	39	81	71	10	3	3	(Z)	48	15	33
1930	735	381	354	410	153	257	144	103	41	115	104	11	4	4	(Z)	62	17	45
1929	965	538	427	575	271	304	170	119	51	138	126	12	5	5	(Z)	77	17	60
1928	955	554	401	572	296	276	166	116	50	134	122	12	5	5	(Z)	78	15	63
1927	912	533	379	526	271	255	168	123	45	138	125	13	5	4	1	75	10	65
1926	945	567	378	547	293	254	170	125	45	152	136	16	5	5	(Z)	71	8	63
1925	832	507	325	464	246	218	162	125	37	140	124	16	4	4	(Z)	62	8	54
1924	820	522	298	490	290	200	143	109	34	122	111	11	4	4	(Z)	61	8	53
1923	771	473	298	456	252	204	132	101	31	119	107	12	7	7	(Z)	57	6	51
1922	600	380	220	355	202	153	113	88	25	89	82	7	4	4	(Z)	39	4	35
1921	408	259	149	231	132	99	92	76	16	50	45	5	1	1	(Z)	34	5	29
1920	586	392	194	310	182	128	112	92	20	109	102	7	7	7	(Z)	48	9	39
1919	539	355	184	275	161	114	99	80	19	107	96	11	5	4	1	53	14	39
1918	650	457	193	349	216	133	120	104	16	116	111	5	9	9	(Z)	56	17	39
1917	674	475	199	354	208	146	131	116	15	130	125	5	7	7	(Z)	52	19	33
1916	613	431	182	306	174	132	127	111	16	129	124	5	5	5	(Z)	46	17	29
1915	471	341	130	210	119	91	111	99	12	107	102	5	4	4	(Z)	39	17	22
1914	395	296	99	182	116	66	103	93	10	77	73	4	3	3	(Z)	30	11	19
1913	434	327	107	222	153	69	100	89	11	75	71	4	3	3	(Z)	34	11	23
1912	441	320	121	236	155	81	91	81	10	72	67	5	3	3	(Z)	39	14	25
1911	365	273	92	181	125	56	87	78	9	62	58	4	1	1	(Z)	34	11	23
1910	354	270	84	179	130	49	80	71	9	61	57	4	1	1	(Z)	33	11	22

(Z) Less than 0.5 millions dollars.

TABLE A11. Stocks of Mineral Products Used in Adjusting Consumption, by Major Mineral Products, Decade Averages, 1900-1969, and Averages 1970-1974 and 1975-1977 (Excludes Government Stocks)

(Gross stocks in millions of constant 1972 dollars)

Mineral commodity	Level of stocks	1975-1977 average	1970-1974 average	1960-1969 average	1950-1959 average	1940-1949 average	1930-1939 average	1920-1929 average	1910-1919 average	1900-1909 average
Minerals, total[1]		9,037	7,674	5,916	4,837	3,615	3,293	2,563	(NA)	(NA)
Iron and ferroalloy ores, total[2]		1,327	1,328	1,194	901	647	(NA)	(NA)	(NA)	(NA)
Iron:										
Iron ore	At mines, consuming plants, and U.S. docks	842	815	823	584	417	[3]93	[3]106	[3]117	[3]45
Pig iron and ferroalloys	At producer and consumer plants	30	32	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Iron and steel scrap	At consumer plants	169	143	193	180	131	188	(NA)	(NA)	(NA)
Ferroalloy metals:										
Manganese	Ore, metal, and alloys held by producers, consumers, and bonded warehouses	75	65	51	41	22	16	(NA)	(NA)	(NA)
Tungsten	Concentrates and primary products held by producers and consumers	24	25	9	12	10	1	(NA)	(NA)	(NA)
Chromium	Ore and alloys held by producers and consumers	33	24	36	32	9	(NA)	(NA)	(NA)	(NA)
Cobalt	Consumer stocks	7	4	4	3	(NA)	(NA)	(NA)	(NA)	(NA)
Molybdenum	Concentrates and primary products held by producers and consumers	59	95	22	16	32	(NA)	(NA)	(NA)	(NA)
Nickel	Metal, alloys, compounds, and scrap held by consumers	88	125	56	33	26	(NA)	(NA)	(NA)	(NA)
Other metals, total[1]		1,634	1,241	614	542	502	493	301	(NA)	(NA)
Copper	Metal, alloys, other primary products, and scrap held by producers and consumers	658	477	229	204	251	363	257	182	113
Lead	Metal, alloys, and scrap held by producers and consumers	67	64	47	48	42	43	20	(NA)	[4]4
Zinc	Metal and scrap held by producers and consumers	42	40	33	34	31	[5]19	[5]7	5	1
Bauxite	Ore, alumina, and metal aluminum industry stocks and scrap held by producers and consumers	249	189	49	39	16	(NA)	(NA)	(NA)	(NA)
Antimony	Ore, metal, alloys, and compounds held by producers	7	5	4	4	4	[6]1	[6]1	(NA)	(NA)
Cadmium	Metal and compounds held by producers and distributors	19	14	9	14	6	(NA)	(NA)	(NA)	(NA)
Magnesium	Metal, alloys, and scrap held by producers and consumers	12	15	12	31	(NA)	(NA)	(NA)	(NA)	(NA)
Mercury	Producer, consumer, and dealer stocks	5	4	4	5	9	1	1	(NA)	(NA)
Platinum group metals	Refiner, importer, and dealer stocks	72	68	59	31	23	8	7	4	(NA)
Selenium and tellurium	Producer stocks	2	2	9	4	(NA)	(NA)	(NA)	(NA)	(NA)
Tin	At raw materials plants, in transit to U.S., jobbers-importers, and afloat to U.S.	65	75	127	110	112	58	8	(NA)	(NA)
Titanium	Ore and slag held by mines distributors, and consumers	26	25	26	17	8	(NA)	(NA)	(NA)	(NA)
Vanadium	Alloys and compounds held by producers and consumers	27	26	6	1	(NA)	(NA)	(NA)	(NA)	(NA)
Uranium	Private inventories at mills, utility companies, and reactor manufacturers	383	237	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Mineral fuels, total[2]		5,800	4,862	3,901	3,267	2,365	2,415	2,139	(NA)	(NA)
Anthracite	At retail yards, electric utilities, coke plants, and upper lake docks	14	15	23	72	42	50	32	37	(NA)
Bituminous coal and lignite	At industrial consumers, retail yards, upper lake docks, and coke at coke plants	1,093	823	666	660	520	402	[7]402	[7]285	(NA)
Crude petroleum	Crude petroleum and refined products on leases, in pipelines, at tank farms, refineries, and terminals; and carbon black at producers	3,562	3,124	2,799	2,395	1,749	1,925	1,693	[8]455	[8]182
Natural gas	Underground storage of natural gas; carbon black at producers	881	715	221	100	37	[9]23	[9]10	(NA)	(NA)
Natural gas liquids	At plants, terminals, and refineries	250	185	192	40	17	15	2	(NA)	(NA)
Construction materials, total[2]		28	34	28	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Crushed and broken stone	Cement at mills	11	11	11	6	5	6	4	3	(NA)
Gypsum	At producers	8	17	15	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Asbestos	At consumers	9	6	2	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Other nonmetallic minerals, total[2]		234	209	179	121	96	81	(NA)	(NA)	(NA)
Potash	At producers	19	14	20	11	1	1	-	1	(NA)
Phosphate rock	At producers	65	54	40	17	8	6	4	5	(NA)
Sulfur	At producers	95	70	66	64	70	61	(NA)	(NA)	(NA)
Sodium chloride	At producers	15	21	7	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Fluorspar	At mines and consumer plants	21	35	31	25	14	11	9	2	(NA)
Bromine	At producers	4	4	5	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Sodium carbonate	At producers	2	2	2	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Sodium sulfate	At producers	1	-	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Mica	At fabricators	2	1	2	4	3	2	(NA)	(NA)	(NA)
Feldspar	At producers	3	3	2	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Talc, soapstone, and pyrophyllite	At producers	5	3	2	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Diatomite	At producers	2	2	2	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)

- Represents zero. (NA) Not available.

[1]Excludes gold and silver. For those commodities, U.S. Bureau of the Mint figures for net consumption in industry and the arts were used for "consumption" rather than making a direct stock adjustment to "apparent consumption" figures. See also footnote[2].

[2]Represents only commodities for which detail is shown. Hence, totals are not always comparable from period to period.

[3]Represents stocks at mines only.

[4]Represents refined lead only.

[5]For 1930-1939, represents zinc-reduction plants only. For 1920-1929, represents smelters and bonded warehouses.

[6]Represents bonded warehouses.

[7]Prior to 1929, excludes stocks at upper lake docks; in 1929 the value of such stocks (in 1972 dollars) was $71 million. For 1910-1919, also excludes coke stocks; the average value of such stocks for 1920-1929 was $12 million (in 1972 dollars).

[8]Excludes stocks of refined products. The average 1924-1929 value of such products (in 1972 dollars) was $419 million.

[9]Represents carbon black only.

TABLE A12. Consumption of Energy Materials in the United States in British Thermal Units, by Source Classes: 1900 to 1977

Year	Energy materials												
	Total (trillion Btu)	Direct energy		Coal		Oil and gas		Uranium		Fuelwood		Feed for horses	
		Trillion Btu	Percent of total	Trillion Btu	Percent of total	Trillion Btu	Percent of total	Trillion Btu	Percent of total	Trillion Btu	Percent of total	Trillion Btu	Percent of total
1977....	72,288	765	1.1	16,620	23.0	53,629	74.2	855	1.2	385	0.5	34	0.0
1976....	70,943	990	1.4	16,029	22.6	52,875	74.5	652	0.9	363	0.5	34	0.0
1975....	66,455	1,046	1.6	14,362	21.6	50,083	75.4	589	0.9	341	0.5	34	0.1
1974....	68,982	1,047	1.5	14,538	21.1	52,657	76.3	389	0.6	317	0.5	34	0.0
1973....	70,782	947	1.3	14,495	20.5	54,720	77.3	284	0.4	302	0.4	34	0.0
1972....	68,342	947	1.4	13,467	19.7	53,435	78.2	171	0.3	286	0.4	36	0.1
1971....	65,396	922	1.4	13,128	20.1	50,874	77.8	130	0.2	303	0.5	39	0.1
1970....	63,912	857	1.3	13,650	21.4	48,960	76.6	74	0.1	329	0.5	42	0.1
1969....	62,251	866	1.4	13,539	21.7	47,389	76.1	48	0.1	364	0.6	45	0.1
1968....	59,159	772	1.3	13,330	22.5	44,573	75.3	43	0.1	396	0.7	45	0.1
1967....	55,865	769	1.4	12,831	23.0	41,769	74.8	26	0.0	424	0.8	46	0.1
1966....	53,937	677	1.3	12,984	24.1	39,762	73.7	19	0.0	447	0.8	48	0.1
1965....	51,212	674	1.3	12,332	24.1	37,676	73.6	12	0.0	468	0.9	50	0.1
1964....	49,183	616	1.3	11,770	23.9	36,246	73.7	11	0.0	489	1.0	51	0.1
1963....	47,472	578	1.2	11,186	23.6	35,137	74.0	11	0.0	507	1.1	53	0.1
1962....	45,522	589	1.3	10,511	23.1	33,836	74.3	8	0.0	524	1.2	54	0.1
1961....	43,479	533	1.2	10,162	23.4	32,153	74.0	6	0.0	569	1.3	56	0.1
1960....	43,025	511	1.2	10,498	24.4	31,335	72.8	2	0.0	612	1.4	67	0.2
1959....	41,911	484	1.2	10,371	24.7	30,321	72.3	1	0.0	656	1.6	78	0.2
1958....	40,136	491	1.2	10,119	25.2	28,736	71.6	1	0.0	702	1.7	87	0.2
1957....	40,329	456	1.1	11,395	28.3	27,638	68.5	(Z)	0.0	746	1.8	94	0.2
1956....	40,080	429	1.1	11,754	29.3	27,005	67.4	-	-	792	2.0	100	0.2
1955....	38,680	397	1.0	11,578	29.9	25,761	66.6	-	-	838	2.2	106	0.3
1954....	35,712	381	1.1	10,602	29.7	23,728	66.4	-	-	885	2.5	116	0.3
1953....	36,278	375	1.0	11,846	32.7	22,992	63.4	-	-	931	2.6	134	0.4
1952....	35,534	375	1.1	12,139	34.2	21,890	61.6	-	-	978	2.8	152	0.4
1951....	35,924	357	1.0	13,585	37.8	20,801	57.9	-	-	1,002	2.8	179	0.5
1950....	33,710	345	1.0	13,422	39.8	18,741	55.6	-	-	1,017	3.0	185	0.5
1949....	30,931	324	1.0	12,727	41.1	16,571	53.6	-	-	1,095	3.5	214	0.7
1948....	33,566	297	0.9	15,706	46.8	16,235	48.4	-	-	1,100	3.3	228	0.7
1947....	32,903	284	0.9	16,212	49.3	15,068	45.8	-	-	1,091	3.3	248	0.8
1946....	30,078	284	0.9	14,714	48.9	13,735	45.7	-	-	1,075	3.6	270	0.9
1945....	31,631	290	0.9	16,486	52.1	13,468	42.6	-	-	1,096	3.5	291	0.9
1944....	32,101	271	0.8	17,566	54.7	12,806	39.9	-	-	1,130	3.5	328	1.0
1943....	30,930	272	0.9	17,563	56.8	11,656	37.7	-	-	1,110	3.6	329	1.1
1942....	28,539	237	0.8	16,068	56.3	10,736	37.6	-	-	1,159	4.1	339	1.2
1941....	27,079	190	0.7	14,450	53.4	10,752	39.7	-	-	1,348	5.0	339	1.3
1940....	24,918	178	0.7	13,219	53.1	9,797	39.3	-	-	1,368	5.5	356	1.4
1939....	22,772	164	0.7	11,738	51.5	9,090	39.9	-	-	1,417	6.2	363	1.6
1938....	20,887	167	0.8	10,625	50.9	8,296	39.7	-	-	1,412	6.8	387	1.9
1937....	23,599	166	0.7	12,978	55.0	8,654	36.7	-	-	1,392	5.9	409	1.7
1936....	23,039	148	0.6	12,984	56.4	8,060	35.0	-	-	1,422	6.2	425	1.8
1935....	20,605	147	0.7	11,320	54.9	7,272	35.3	-	-	1,437	7.0	429	2.1
1934....	19,818	126	0.6	11,079	55.9	6,724	33.9	-	-	1,476	7.4	413	2.1
1933....	18,615	128	0.7	10,256	55.1	6,310	33.9	-	-	1,506	8.1	415	2.2
1932....	17,941	126	0.7	9,897	55.2	6,047	33.7	-	-	1,461	8.1	410	2.3
1931....	20,272	114	0.6	11,826	58.3	6,543	32.3	-	-	1,378	6.8	411	2.0
1930....	22,691	123	0.5	14,322	63.1	6,504	28.7	-	-	1,325	5.8	417	1.8
1929....	24,849	130	0.5	16,143	65.0	6,848	27.6	-	-	1,270	5.1	458	1.8
1928....	23,748	131	0.6	15,726	66.2	6,137	25.8	-	-	1,261	5.3	493	2.1
1927....	23,376	116	0.5	15,781	67.5	5,689	24.3	-	-	1,261	5.4	529	2.3
1926....	24,193	107	0.4	16,799	69.4	5,470	22.6	-	-	1,251	5.2	566	2.3
1925....	22,530	92	0.4	15,376	68.2	5,161	22.9	-	-	1,304	5.8	597	2.6
1924....	22,434	87	0.4	15,611	69.6	4,765	21.2	-	-	1,334	5.9	637	2.8
1923....	23,458	85	0.4	16,780	71.5	4,584	19.5	-	-	1,348	5.7	661	2.8
1922....	19,152	78	0.4	13,242	69.1	3,751	19.6	-	-	1,387	7.2	694	3.6
1921....	18,823	68	0.4	13,298	70.6	3,299	17.5	-	-	1,456	7.7	702	3.7
1920....	22,177	74	0.3	16,492	74.4	3,395	15.3	-	-	1,471	6.6	745	3.4
1919....	20,566	62	0.3	15,504	75.4	2,771	13.5	-	-	1,476	7.2	753	3.7
1918....	22,119	57	0.3	17,334	78.4	2,461	11.1	-	-	1,506	6.8	761	3.4
1917....	22,177	53	0.2	17,276	77.9	2,597	11.7	-	-	1,490	6.7	761	3.4
1916....	20,633	46	0.2	16,084	78.0	2,222	10.8	-	-	1,520	7.4	761	3.7
1915....	18,134	40	0.2	13,885	76.6	1,941	10.7	-	-	1,498	8.3	770	4.2
1914....	17,872	34	0.2	13,823	77.3	1,733	9.7	-	-	1,539	8.6	743	4.2
1913....	19,220	33	0.2	15,200	79.1	1,715	8.9	-	-	1,529	8.0	743	3.9
1912....	18,290	30	0.2	14,365	78.5	1,636	8.9	-	-	1,543	8.4	716	3.9
1911....	17,237	27	0.2	13,471	78.2	1,438	8.3	-	-	1,593	9.2	708	4.1
1910....	17,301	25	0.1	13,660	79.0	1,355	7.8	-	-	1,587	9.2	674	3.9
1909....	15,971	23	0.1	12,573	78.7	1,122	7.0	-	-	1,567	9.8	686	4.3
1908....	14,779	20	0.1	11,480	77.7	1,039	7.0	-	-	1,573	10.6	667	4.5
1907....	16,391	19	0.1	13,151	80.2	992	6.1	-	-	1,580	9.6	649	4.0
1906....	14,508	18	0.1	11,343	78.2	926	6.4	-	-	1,591	11.0	630	4.3
1905....	14,078	17	0.1	10,899	77.4	940	6.7	-	-	1,611	11.4	611	4.3
1904....	12,828	14	0.1	9,809	76.5	775	6.0	-	-	1,637	12.8	593	4.6
1903....	13,011	13	0.1	10,041	77.2	729	5.6	-	-	1,654	12.7	574	4.4
1902....	11,106	12	0.1	8,230	74.1	639	5.8	-	-	1,669	15.0	556	5.0
1901....	10,982	11	0.1	8,263	75.2	485	4.4	-	-	1,686	15.4	537	4.9
1900....	10,154	10	0.1	7,515	74.0	408	4.0	-	-	1,703	16.8	518	5.1

- Representa zero. (Z) Less than 0.5.

Source: Based primarily on data included in table A5. Conversion factors uaed are: For direct energy and uranium, 1 kwh=3,412 Btu; for coal, 1 ton=26,194 M Btu; for crude petrolcum, 1 barrel=5,800 M Btu; for natural gas, 1 MCF=1,024 M Btu; for natural gas liquids, 1 barrel=4,200 M Btu; for fuelwood, 1 cu. ft.=260 M Btu; for feed for horses and mules, based on the approximate energy equivalent of the grain and hay consumed by such farm and nonfarm animals, averaging 676.4×10^{12} Btu per animal for Census years 1900-1940.

APPENDIX B.—The Raw Materials Price Indexes

Raw materials price indexes, closely comparable to the measures of raw materials consumption, have been constructed to permit a better measure of the relation between price movements and consumption of the various groups of commodities (see table B1).

The consumption weights used in these series have the advantage over production weights, not only of being representative of commodities in the relative magnitudes in which they have been consumed in the United States, but also of including representation of raw materials not produced in this country or produced domestically in negiligible amounts.

A few such price figures were shown in the President's Materials Policy Commission report. But the first complete price series of this type were those shown in Bureau of the Census Working Paper Number 1. For Census Working Paper Number 6 the price indexes were completely revised, both to represent somewhat better balanced and more complete coverage and to introduce weight bases representative of the consumption patterns of four different major periods since 1900, rather than of the single period 1935-1939 as in the earlier report. For Working Papers Numbers 30 and 35, the same techniques and commodity coverage as in Census Working Paper Number 6 were used. For Working Paper Number 35 and the present report, however, consumption patterns for five rather than four major periods since 1900 are used and the consumption patterns are determined in 1967 rather than 1954 dollars. In the present report, coverage has been increased to include fishery products for 1939-1977, wildlife products for 1967-1977, and uranium and vanadium for 1965-1977. The index base used in this report is 1972.

GENERAL METHODS EMPLOYED

Aggregative price indexes are used. These represent prices of individual materials (or groups of materials) weighted by quantities consumed in the base period. The basic formula used to combine the prices of the various materials is as follows.

$$P_n = \frac{\Sigma \frac{p_n}{p_o} p_o q_o}{\Sigma p_o q_o} \cdot 100 = \frac{\Sigma p_n q_o}{\Sigma p_o q_o} \cdot 100$$

where P_n = index number for raw materials prices for a given year "n,"

p_n = average unit price of an individual material in a given year "n,"

p_o = average unit price of an individual material in the base period,

q_o = quantity of an individual material consumed in the base period,

$\frac{P_n}{p_o}.100$ = price index of an individual material with period "o" as a base,

$p_o q_o$ = value of an individual material consumed in the base period.

The index is constructed with 1972 as an index base, but with weight bases representative of five periods of approximately 15 years. The weight base periods used are 1905-1909, 1920-1924, 1935-1939, 1950-1954, and 1965-1969. The indexes are spliced in the years 1914, 1929, 1944, and 1959.

In actual use, two adaptations were made of the above formula: (1) For certain commodity areas, primarily agricultural products, suitable consumption series were not available for each individual commodity. For these areas, group price indexes were used at the levels for which suitable consumption measures were available. (2) The actual consumption aggregates used represented averages of consumption aggregates in 1967 dollars of the type shown in tables A4 and A5. Using the consumption aggregates in terms of 1967 dollars introduces a slight bias into the weights, but this bias is probably negligible in all areas.

TYPES AND SOURCES OF DATA USED

Wherever they were available, the prices used were those representing the primary market for each raw material. Where these were not obtainable, available prices for the market closest to the primary market were used. For example, lumber price relatives were used to represent sawlog price movements; woodpulp prices were used to represent pulpwood; and for some metal ores, prices were represented by the prices of metals in major markets—as electrolytic copper f.o.b. refinery as priced in New York markets, instead of the mine value of copper ore. The weights applied to such price relatives, however, were always at the raw materials level.

For the earlier years, especially those prior to 1916, lack of comparable prices made it necessary to extrapolate the price data for some raw materials back to 1900 by various expendients. Some price series were extrapolated backward by

prices of a different grade or kind of the same material. Thus prices of plantation rubber ribbed smoked sheets were extrapolated from 1912 to 1900 by prices of Para Island rubber. Woodpulp prices were carried from 1912 back to 1900 by means of average unit prices of imported woodpulp. Other series were extrapolated by prices of related materials; for example, the price of dimension limestone for 1906 through 1908 was estimated to move in accordance with the price of dimension granite.

In the case of three groups of commodities—domesic agricultural mateials, fishery products and forest products—price indexes developed by other agencies were used to represent certain groups of raw materials, even though the weighting systems were somewhat different from those described above. In each case, however, segments of these groups were recombined, using the consumption aggregates of this report as weights. The more specific sources and qualifications of data used are included in the following paragraphs.

Agricultural Materials

Price indexes for nine groups of food crops, six groups of nonfood crops, three groups of livestock products for food, and three groups of livestock products for nonfood use were combined with consumption weights to yield the agricultural materials price indexes.

Agricultural Materials Produced Domestically

For the years 1910-1977, the group price indexes used are those for prices received by farmers computed by the Economics, Statistics, and Cooperatives Service, Crop Reporting Branch, U.S. Department of Agriculture. (See Major Statistical Series of the U.S. Department of Agriculture, Vol I, Agricultural Prices and Parity, Agriculture Handbook No. 365, October 1970 and the U.S. Department of Agriculture annual publications, Agricultural Statistics.) These indexes measure the change in average prices for important agricultural commodities at the point of first sale out of farmers' hands, which is generally the local market. In general, the prices used represent the average price for all grades or qualities of each product sold in the specified period. The annual series represent a weighted average of figures obtained for the marketing year.

Most of the data were obtained from voluntary price reporters scattered throughout all areas of the United States. For the latter part of the period, the series are based on prices of 45 important commodities that account for over 91 percent of the total cash receipts from the sale of farm products. Somewhat fewer commodities are included for the early years. (See table B2 and its footnote 3.)

Four weight bases were used for the series: 1924-1929 for 1910 through 1934, 1937-1941 for 1935 through September 1952, 1953-1957 for October 1952 through 1964 and 1971-1973 for 1965 through 1977. The weights were adjusted to reflect weights for commodities not included in the index. The commodity or commodity group indexes used from this source are: Food grains; feed grains; fruits; potatoes, sweet potatoes, and dry edible beans; commercial vegetables for fresh market; oil bearing crops; cotton; tobacco; dairy products; meat animals; poultry and eggs; and wool (prior to 1977).

For the years 1900-1909, the individual group indexes of prices received by farmers were extrapolated backward by means of indexes of farm product prices shown by Louis H. Bean, Technical Bulletin 703, page 140, U.S. Department of Agriculture. The extrapolation was based on the year 1910, for which both indexes were available.

Foreign Agricultural Materials

The prices of imported agricultural materials used in constructing the census indexes were those quoted on organized exchanges or markets and collected by the Bureau of Labor Statistics, U.S. Department of Labor. They represent the first important commercial transaction in the commodity after arrival in this country. Price indexes of individual commodities are in some cases (for example, rubber) based on weighted average quotations of two or more kinds or grades. Such series were used for bananas; certain oil crops; coffee, tea, and cocoa; pepper, representing spices; rubber; hard fibers; and silk.

Fishery Products

Indexes of exvessel prices of 30 species of edible finfish, edible shellfish, and industrial fish compiled by the National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration, U.S. Department of Commerce were used to construct the fishery products price indexes. These NMSF indexes begin in 1939 and are available monthly. For later years they cover about 70 percent of the landed value received by fishermen for all finfish and shellfish caught. The annual figures represent simple averages of the 12 monthly figures. For each month, the indexes for each species are combined to group totals with weights representing the total value of the species landed in the given month. The three NMFS indexes were combined using consumption weights, for the 2 weight base periods covered, representing finfish for food, shellfish for food, and nonfood fishery products. The broad raw materials group indexes were spliced in 1939 to include fishery products indexes for 1939-1977.

Wildlife Products

Unit value series for 13 classes of furs, weighted by approximate 1967 consumption, were used in constructing the wildlife products price index. For 6 classes, the average pelt price as reported by the Fur Resources Committee was used. For 6 classes, which were primarily imported products, the average unit value of imports was used. For mink, the average unit value of exports was used, since a major part of this item, both consumed domestically and exported, comes from fur farms for which unit values at point of production are not available. The broad raw materials group indexes were spliced in 1967 to include the wildlife products index for 1967-1977.

Forest Products

Forest product prices are represented by the lumber, woodpulp, and plywood price indexes computed by the Bureau

of Labor Statistics. These are based on prices quoted in primary markets for these commodities. The lumber index for recent years is composed of quotations for 49 kinds or grades of hardwoods and softwoods. The woodpulp index currently comprises prices for five different types of pulp. The plywood index is based on three grades of softwood and two grades of hardwood plywood. These indexes were each constructed by the Bureau of Labor Statistics (BLS) with quantity weights representing averages for the years 1929 and 1931 for years prior to 1947, averages for the year 1947 for 1947-1954, and subsequently the weights were revised at approximately 5-year intervals on the basis of Census of Manufactures figures. The BLS indexes were combined, using consumption weights representing sawlogs, pulpwold, and veneer logs, respectively, for the five base periods.

Minerals

Price indexes for five major groups of commodities were constructed for minerals, based on price series for 58 individual commodities. The minerals price indexes are based primarily on unit value at point of production series for minerals developed from quantity and value of products figures contained in the Minerals Yearbook of the Bureau of Mines, U.S. Department of the Interior. Therefore, as for agriculture, the series used represent averages for all grades of products shipped from the mineral industries or used in making manufactured products at associated establishments. Most of the figures used are based on data collected in the monthly or annual surveys of the Bureau of Mines. These represent essentially complete coverage of domestic production of the specified commodities.

For the major nonferrous-metal ores, however, the Bureau of Mines collects no value-of-products data. These commodities were represented by the prices of the corresponding metals as quoted at St. Louis or New York. Since the prices paid for ores usually reflect closely these quoted prices for the metals contained, it is believed that no significant bias is introduced by the use of this device. Similarly, in a few other cases price relatives for the principal products made from the mineral raw materials were used to represent the price trend for the raw mineral; examples are brick to represent common clay, and cement and lime, respectively, to represent the stone used in their production.

For several series, comparable data were not available for portions of the early period. In some cases, this was because there was negligible domestic production of the mineral in early years. Thus, figures for magnesium prices prior to 1914 were extrapolated on the basis of the import price of German magnesium. For uranium and vanadium suitable price series were not available prior to 1965. The "other metals except gold" price index was spliced in 1965 to include these items for 1965-1977.

SCOPE OF THE SERIES

The price index covers commodities representing about 94 percent of the value of all raw materials included in the consumption measures in the periods 1950-1954 and 1965-1969, and this coverage was nearly as high for earlier weight base periods. The exclusion of fishery products prior to 1939 and wildlife products prior to 1967 reduces the coverage for the earlier periods. Fuelwood is one of the most important invidivual commodities not represented.

The table on page 83 indicates the approximate coverage for various segments of the price index in the base periods.

Table B2 shows the raw materials groups or individual raw materials actually represented in the price indexes, together with their relative importance in each weight base period in terms of 1967 dollars. This table includes the complete list of mineral products, but only product groups for certain other areas. Table B3 presents the detailed list of domestic agricultural, fishery, and wildlife commodities included for the later years, with their approximate weight as a component of the all raw materials index for 1967 and for agricultural commodities only for the period 1935-1939.

EFFECT OF CHANGING WEIGHT BASE

The use of changing weight bases in constructing the price indexes, in general, has little effect at the splicing points. This is indicated in table B4 which shows indexes for adjacent years to each splicing point computed on the basis of weights used for both the preceding and succeeding periods. In almost all cases, the two indexes differ by two points or less. However, the much larger possible divergence is indicated by the difference of 18 points for the two different weight bases when applied to the 1945 figures for "Abrasives and miscellaneous minerals."

If constant weights had been used throughout the entire period, the fluctuations in the series would have been much greater. To illustrate the influence of constant weights on these indexes, table B5 presents the price indexes as developed for table B1 for the years 1950, 1940, 1930, 1920, 1910, and 1900 in comparison with similar indexes constructed with constant 1965-1969 weights. The fixed weight base series are subject to much wider fluctuations due to the greater influence of the more erratic behavior of price series for commodities in periods when the total value of such commodities was relatively small. This is particularly notable in the 1900 and 1920 figures for mineral fuels, showing the influence of pertoleum price changes in periods when oil was much less important in mineral fuel consumption than in later years.

COMPARATIVE PRICE INDEXES FOR ALL WHOLESALE COMMODITIES AND FINISHED COMMODITIES

The price indexes described in the preceding paragraphs represent prices in current dollars for each period. In order to judge the full significance of the trends indicated, it is necessary to compare these indexes with measures of price trends for other segments of the U.S. economy.

Two such measures are presented in table B1. The Bureau of Labor Statistics index of all wholeslae commodity prices is shown on a 1972 base. Raw materials price indexes are sometimes presented as percentages of this "all wholesale commodities" price index. Such series are frequently described as "real" prices, because they approximately eliminate the effect of changes in the value of the dollar.

The other comparison index shown in table B1 is an index of prices of finished commodities. For the period 1929-1977 this index was computed by developing an average of the Office of Business Economics' implicit price deflators for consumer durable and nondurable goods, prodicers' durable equipment, and private new construction. These price deflators were weighted by 1965-1969 average expenditures for the period 1959-1977, by 1950-1954 average expenditures for the period 1944-1958, and by 1935-1939 average expenditures for the period 1929-1943. For the period 1900-1928, an index constructed by William H. Shaw for the National Bureau of Economic Research was used. This index represents all finished commodities, including construction materials. Overlapping years were available for the two series, which permitted splicing of the series in 1929.

Materials group	Average annual value of consumption (millions of 1967 dollars)					Value of consumption of commodities included in price index as percent of group total value of consumption				
	1965-1969	1950-1954	1935-1939	1920-1924	1905-1909	1965-1969	1950-1954	1935-1939	1920-1924	1905-1909
All raw materials, except gold	64,803	46,780	31,168	26,711	21,585	94.3	93.9	91.7	91.1	89.7
Agricultural materials	33,758	26,637	20,308	16,876	13,861	93.0	94.0	93.6	94.7	94.7
Crops	12,140	10,231	8,301	6,422	5,478	[1]84.2	86.3	86.1	88.8	88.9
Livestock	21,618	16,406	12,007	10,454	8,383	[1]98.1	98.8	98.8	98.4	98.5
Fishery products	1,116	642	292	242	222	79.1	[2]70.0	[2]70.0	0.0	0.0
Wildlife products	127	145	126	75	73	[2]90.0	0.0	0.0	0.0	0.0
Forest products	3,549	3,275	2,619	3,011	3,343	87.3	81.0	61.3	62.4	65.3
Minerals, except gold	26,253	16,081	7,823	6,508	4,087	97.6	98.2	99.2	99.5	99.4
Iron and ferro-alloy ores	1,739	1,305	464	510	449	100.0	100.0	100.0	100.0	100.0
Other metal ores	1,982	1,554	618	602	385	85.0	90.5	96.8	97.7	98.2
Mineral fuels	18,401	11,096	5,858	4,627	2,592	100.0	100.0	100.0	100.0	100.0
Construction materials	2,587	1,340	609	570	546	99.8	99.9	100.0	100.0	100.0
Chemical and fertilizer minerals	1,222	572	205	141	76	77.7	83.2	83.4	92.9	84.2
Abrasives and miscellaneous materials	322	214	69	58	39	81.1	82.2	85.5	87.9	82.1

[1]Represents 1967.
[2]Approximate coverage.

TABLE B1. Indexes of Raw Materials Prices: 1900 to 1977

(1972 = 100)

Year	Comparison indexes		All raw materials except gold	Raw materials, by broad use classes			Raw materials, by broad product groups								
							Agricultural materials							Fishery products	Wildlife products
								Crops			Livestock				
	All wholesale commodities	Finished commodities		Foods	Energy materials	Physical-structure materials	All agricultural materials	All crops	Foods	Nonfoods	All livestock	Foods	Nonfoods		
1977.....	163	142	197	153	284	188	154	203	209	183	130	127	141	208	214
1976.....	154	135	181	142	254	177	144	171	167	180	130	130	134	181	183
1975.....	147	129	168	137	231	162	138	159	161	156	128	127	138	149	134
1974.....	134	118	155	134	195	152	137	167	165	172	123	122	145	151	149
1973.....	113	106	126	136	115	120	135	136	139	126	135	135	149	147	139
1972.....	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1971.....	96	97	93	89	98	94	89	95	96	92	86	87	81	88	78
1970.....	93	94	89	88	91	90	88	91	92	87	87	87	81	82	76
1969.....	89	91	87	87	86	88	87	88	89	84	86	86	87	78	123
1968.....	86	87	82	81	83	86	81	90	92	83	77	77	80	70	127
1967.....	84	84	80	77	82	82	78	87	87	84	74	74	80	63	127
1966.....	84	82	81	81	81	82	82	91	91	89	78	78	84	67	(NA)
1965.....	81	80	78	75	80	82	77	89	89	90	70	70	77	63	(NA)
1964.....	80	79	75	69	80	80	72	88	88	90	64	63	81	58	(NA)
1963.....	79	78	73	69	80	79	72	84	81	91	67	66	82	56	(NA)
1962.....	80	78	75	70	81	79	73	81	78	92	69	69	82	56	(NA)
1961.....	79	77	75	69	80	79	72	80	77	91	68	68	78	51	(NA)
1960.....	80	77	75	70	80	79	72	80	77	88	69	68	77	49	(NA)
1959.....	80	76	75	70	80	80	73	80	76	91	69	69	76	55	(NA)
1958.....	79	76	77	75	81	77	77	83	83	87	73	73	78	58	(NA)
1957.....	78	75	75	69	82	78	71	82	80	88	66	66	80	55	(NA)
1956.....	76	72	73	67	76	80	70	86	84	90	61	61	68	57	(NA)
1955.....	74	71	72	67	74	78	70	83	81	90	63	63	71	56	(NA)
1954.....	74	71	73	72	74	76	74	88	88	91	67	66	82	55	(NA)
1953.....	73	70	74	74	73	75	76	84	83	88	72	71	84	51	(NA)
1952.....	74	70	77	83	69	75	85	92	90	97	82	82	95	54	(NA)
1951.....	76	69	80	87	69	79	90	91	87	104	90	89	125	50	(NA)
1950.....	69	64	71	75	67	70	78	82	80	92	75	74	96	48	(NA)
1949.....	66	63	69	72	67	64	74	76	75	81	73	73	84	44	(NA)
1948.....	70	64	75	82	70	67	84	84	81	91	85	85	90	49	(NA)
1947.....	64	60	68	78	54	62	80	85	84	90	77	77	83	46	(NA)
1946.....	52	53	56	66	42	51	68	74	73	80	65	65	70	44	(NA)
1945.....	46	50	50	60	37	46	61	70	71	69	57	57	62	38	(NA)
1944.....	45	48	48	57	37	45	58	69	70	68	53	53	59	33	(NA)
1943.....	45	45	47	57	35	44	58	68	70	63	53	53	60	37	(NA)
1942.....	43	41	41	47	33	40	48	52	51	55	47	46	56	30	(NA)
1941.....	38	36	33	36	31	34	38	39	39	40	38	37	47	21	(NA)
1940.....	34	33	28	29	27	29	30	32	32	32	30	29	39	17	(NA)
1939.....	33	32	27	28	27	27	29	29	29	30	29	29	37	16	(NA)
1938.....	34	33	27	28	29	26	29	29	28	30	30	30	31	(NA)	(NA)
1937.....	37	34	32	35	30	31	36	41	41	40	34	34	38	(NA)	(NA)
1936.....	35	32	29	33	28	28	33	37	37	37	32	32	35	(NA)	(NA)
1935.....	35	32	28	31	26	27	32	35	35	37	30	30	31	(NA)	(NA)
1934.....	32	32	25	25	27	26	26	34	34	36	22	22	24	(NA)	(NA)
1933.....	29	29	20	21	20	21	21	26	28	23	19	19	23	(NA)	(NA)
1932.....	28	29	20	21	22	19	21	24	27	17	19	19	20	(NA)	(NA)
1931.....	32	33	24	27	22	23	27	28	30	24	26	26	30	(NA)	(NA)
1930.....	37	38	32	35	30	30	36	41	43	36	34	33	44	(NA)	(NA)
1929.....	41	39	38	43	32	37	45	49	49	48	43	42	58	(NA)	(NA)
1928.....	42	40	38	43	32	37	45	52	52	50	42	41	59	(NA)	(NA)
1927.....	41	40	37	41	34	37	43	50	51	48	40	38	55	(NA)	(NA)
1926.....	43	41	40	43	40	39	45	53	55	48	41	40	59	(NA)	(NA)
1925.....	45	42	40	43	38	41	46	59	59	60	40	39	61	(NA)	(NA)
1924.....	42	41	36	37	37	39	39	52	51	58	34	33	53	(NA)	(NA)
1923.....	44	43	36	36	40	42	39	50	48	61	34	33	57	(NA)	(NA)
1922.....	42	41	36	36	43	38	39	50	50	51	34	33	52	(NA)	(NA)
1921.....	42	45	35	36	43	35	37	47	49	40	33	33	43	(NA)	(NA)
1920.....	67	62	53	54	62	54	57	74	74	76	50	49	71	(NA)	(NA)
1919.....	60	55	52	59	43	51	62	76	74	87	57	55	86	(NA)	(NA)
1918.....	57	52	48	54	41	48	58	69	66	81	54	52	83	(NA)	(NA)
1917.....	51	44	42	47	35	43	50	59	58	67	46	44	71	(NA)	(NA)
1916.....	37	34	30	33	23	32	35	42	42	46	33	31	49	(NA)	(NA)
1915.....	30	29	25	29	18	26	30	35	35	35	28	27	39	(NA)	(NA)
1914.....	30	29	26	30	19	25	31	36	36	38	30	29	40	(NA)	(NA)
1913.....	30	29	26	30	20	27	32	38	38	42	29	28	39	(NA)	(NA)
1912.....	30	29	25	29	19	25	30	39	40	38	27	26	36	(NA)	(NA)
1911.....	28	28	24	27	18	24	28	39	39	37	24	23	32	(NA)	(NA)
1910.....	31	29	25	29	18	25	31	37	37	39	28	27	39	(NA)	(NA)
1909.....	29	28	23	26	18	24	27	35	34	37	24	23	35	(NA)	(NA)
1908.....	27	28	21	23	18	23	24	31	31	33	21	20	29	(NA)	(NA)
1907.....	28	28	24	26	20	24	27	41	43	35	22	21	33	(NA)	(NA)
1906.....	27	26	21	21	18	25	23	28	27	34	21	20	33	(NA)	(NA)
1905.....	26	25	19	20	17	22	22	27	27	29	19	19	31	(NA)	(NA)
1904.....	26	24	19	20	18	20	21	26	26	29	18	18	27	(NA)	(NA)
1903.....	26	24	19	20	20	22	21	24	23	28	20	19	29	(NA)	(NA)
1902.....	26	24	20	22	18	20	23	26	26	27	22	21	30	(NA)	(NA)
1901.....	24	24	19	20	17	20	21	26	27	25	19	18	28	(NA)	(NA)
1900.....	24	24	18	18	18	21	19	22	22	26	18	18	27	(NA)	(NA)

TABLE B1. Indexes of Raw Materials Prices: 1900 to 1977—Continued

(1972 = 100)

Year	Raw materials, by broad product groups--Continued													
	Forest products			Minerals, except gold										
					Metals, except gold			Mineral fuels				Other nonmetallic minerals		
	All forest products	Sawlogs	Pulpwood	All minerals, except gold	All metals, except gold	Iron and ferro-alloy ores	Other metal ores, except gold	All mineral fuels	Coal	Oil and gas	Construction minerals	All other nonmetallic minerals	Chemical and fertilizer minerals	Abrasives and miscellaneous minerals
1977.....	191	173	253	255	193	209	178	285	275	288	151	195	203	171
1976.....	172	146	257	231	181	193	170	255	255	256	144	199	212	158
1975.....	152	121	254	211	167	172	163	232	252	227	133	200	221	135
1974.....	145	130	195	179	154	134	173	195	205	193	117	141	146	124
1973.....	125	129	115	113	113	106	120	115	111	116	104	107	105	111
1972.....	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1971.....	89	85	100	98	98	96	99	98	93	99	96	100	101	97
1970.....	78	71	98	93	100	91	108	91	82	93	90	101	103	94
1969.....	85	83	90	87	91	85	96	86	66	90	87	100	103	91
1968.....	78	74	90	85	88	84	91	83	61	87	84	115	123	91
1967.....	70	63	90	84	83	81	84	82	60	87	83	108	115	86
1966.....	71	63	90	82	79	78	81	81	59	85	81	102	109	83
1965.....	68	59	90	81	82	77	87	80	58	84	80	100	106	84
1964.....	67	58	88	80	76	76	75	80	59	84	80	97	102	84
1963.....	65	57	84	80	72	75	69	80	58	85	79	94	99	80
1962.....	64	56	85	80	70	74	66	81	59	85	79	108	102	128
1961.....	64	55	87	81	69	74	65	81	60	85	79	120	104	168
1960.....	68	58	92	80	70	72	67	80	61	84	79	114	102	151
1959.....	71	60	92	79	69	73	65	80	63	83	79	111	100	144
1958.....	67	56	92	79	65	73	59	81	64	84	77	110	103	132
1957.....	67	57	90	81	69	74	64	82	67	85	77	110	103	130
1956.....	70	61	90	78	75	72	77	76	63	78	76	108	102	127
1955.....	69	59	86	75	70	68	71	74	59	77	73	112	103	140
1954.....	65	56	83	74	64	67	62	74	60	77	72	105	99	120
1953.....	66	57	83	72	63	66	61	73	65	74	70	98	92	114
1952.....	67	57	85	68	61	60	61	69	65	69	68	88	83	103
1951.....	69	59	87	68	60	56	63	68	65	68	68	84	81	93
1950.....	63	54	73	64	51	49	53	66	64	66	66	79	76	85
1949.....	56	47	74	64	49	46	51	67	64	67	64	75	72	81
1948.....	61	51	82	65	48	40	55	70	65	70	62	74	72	81
1947.....	54	45	73	54	43	36	49	54	54	53	59	73	69	82
1946.....	35	28	53	43	35	33	36	42	46	40	53	68	65	78
1945.....	31	24	48	39	32	32	33	37	41	35	50	64	64	63
1944.....	30	24	48	38	32	31	32	37	39	36	49	66	62	78
1943.....	28	22	44	37	33	34	33	35	36	35	48	57	62	54
1942.....	27	21	44	35	32	31	33	33	32	35	44	49	60	37
1941.....	25	19	43	33	31	30	32	31	29	33	40	46	58	32
1940.....	21	16	39	30	30	30	29	28	26	30	37	45	57	31
1939.....	18	15	25	29	29	31	27	28	24	30	38	45	58	29
1938.....	18	14	29	31	27	31	25	30	26	33	38	47	61	29
1937.....	21	16	40	32	32	31	32	31	26	35	40	47	61	30
1936.....	17	14	26	30	27	29	25	29	24	33	39	46	60	29
1935.....	16	13	25	29	26	28	24	27	24	30	38	45	59	29
1934.....	17	13	27	29	26	29	24	28	24	30	39	46	61	29
1933.....	14	11	22	23	23	29	19	21	20	22	38	46	61	27
1932.....	12	9	22	25	20	28	14	24	20	27	39	47	63	29
1931.....	14	11	27	25	22	28	19	22	23	22	42	51	64	35
1930.....	17	13	30	33	27	28	26	31	25	37	45	57	67	46
1929.....	19	15	30	36	33	29	36	33	26	40	48	75	68	91
1928.....	18	14	31	35	31	27	33	33	26	37	49	75	68	92
1927.....	19	15	32	37	32	27	35	35	28	41	49	75	68	90
1926.....	20	16	34	42	34	27	38	42	29	57	49	75	68	91
1925.....	21	16	32	40	33	26	37	39	28	52	48	70	64	85
1924.....	20	16	32	39	32	29	33	38	30	45	49	73	68	87
1923.....	23	18	38	42	34	34	33	41	35	43	50	74	68	87
1922.....	20	16	32	44	30	32	28	46	37	51	49	76	70	88
1921.....	19	15	42	45	30	35	26	46	36	54	53	88	84	94
1920.....	35	27	85	61	40	40	39	65	44	92	59	96	87	116
1919.....	24	18	41	45	39	36	41	45	31	61	48	83	76	100
1918.....	18	14	44	46	46	36	52	44	31	60	42	90	88	92
1917.....	16	12	56	40	44	33	52	37	27	48	35	84	79	92
1916.....	12	9	43	29	39	24	49	25	17	35	26	70	64	84
1915.....	10	8	24	23	30	20	37	18	14	21	25	69	61	88
1914.....	11	8	25	22	23	19	26	20	15	26	25	62	56	73
1913.....	12	9	27	24	27	22	30	21	15	29	25	59	57	66
1912.....	11	8	25	22	26	19	32	20	15	24	25	60	56	68
1911.....	10	8	23	21	26	23	28	18	14	20	23	57	55	59
1910.....	10	8	24	21	28	26	26	18	14	20	22	54	55	53
1909.....	10	8	25	21	25	23	25	18	13	22	21	56	58	50
1908.....	10	8	25	21	25	23	25	19	14	23	22	55	56	52
1907.....	11	9	24	23	31	26	34	19	14	23	24	60	56	67
1906.....	11	9	23	22	29	23	34	19	14	23	24	57	52	67
1905.....	9	7	24	21	25	20	28	18	13	20	25	57	55	62
1904.....	9	7	21	21	21	16	25	19	14	27	25	58	58	59
1903.....	9	7	21	24	24	21	25	21	15	29	27	59	58	61
1902.....	8	7	24	21	21	17	23	19	14	25	24	57	56	58
1901.....	8	6	26	21	21	16	27	18	13	30	23	62	63	61
1900.....	8	6	26	22	28	26	28	19	12	37	23	66	71	53

TABLE B2. Raw Materials Represented in the Price Indexes

Materials group or material[1]	Average annual value of consumption									
	Millions of 1967 dollars[2]					Percent of all raw materials represented				
	1965-1969	1950-1954	1935-1939	1920-1924	1905-1909	1965-1969	1950-1954	1935-1939	1920-1924	1905-1909
ALL RAW MATERIALS, EXCEPT GOLD	65,011	47,482	33,017	29,948	25,045	100.0	100.0	100.0	100.0	100.0
BROAD MATERIALS GROUPS										
Agricultural materials	33,986	27,339	22,157	20,113	17,321	52.3	57.6	67.1	67.2	69.2
Fishery and wildlife products	1,243	787	418	316	294	1.9	1.7	1.3	1.1	1.2
Forest products	3,549	3,275	2,619	3,011	3,343	5.5	6.9	7.9	10.1	13.3
Minerals, except gold	26,233	16,081	7,823	6,508	4,087	40.4	33.9	23.7	21.7	16.3
MATERIALS										
AGRICULTURAL MATERIALS[3]	33,986	27,339	22,157	20,113	17,321	52.3	57.6	67.1	67.2	69.2
Crops[3]	12,327	10,846	9,918	9,184	8,083	19.0	22.8	30.0	30.7	32.3
Foods[3]	9,202	7,407	6,243	5,213	4,462	14.2	15.6	18.9	17.4	17.8
Foods grains[3]	758	709	665	609	685	1.2	1.5	2.0	2.0	2.7
Feed grains and sugar crops[3]	1,084	695	608	634	623	1.7	1.5	1.8	2.1	2.5
Fruits and tree nuts:										
Domestic fruits[3]	1,459	1,434	1,121	874	536	2.2	3.0	3.4	2.9	2.1
Bananas	523	274	273	189	215	0.8	0.6	0.8	0.6	0.9
Potatoes, sweet potatoes, and dry beans and peas[3]	493	503	462	423	383	0.8	1.1	1.4	1.4	1.5
Fresh vegetables[3]	2,514	1,944	1,722	1,476	1,304	3.9	4.1	5.2	4.9	5.2
Oil crops[3]	821	474	383	296	218	1.3	1.0	1.2	1.0	0.9
Coffee, tea, and cocoa	1,481	1,364	997	705	496	2.3	2.9	3.0	2.4	2.0
Spices	69	10	12	7	2	0.1	0.0	0.0	0.0	0.0
Nonfoods[3]	3,125	3,439	3,675	3,971	3,621	4.8	7.2	11.1	13.3	14.5
Cotton[3]	1,027	921	707	396	274	1.6	1.9	2.1	1.3	1.1
Nonfood oil crops[3]	219	262	261	208	204	0.3	0.6	0.8	0.7	0.8
Tobacco[3]	899	995	627	518	469	1.4	2.1	1.9	1.7	1.9
Feed grains and other nonfood domestic crops	769	961	1,840	2,691	2,592	1.2	2.0	5.6	9.0	10.3
Rubber	182	215	158	88	15	0.3	0.5	0.5	0.3	0.1
Other imported nonfood crops	29	85	82	70	67	0.0	0.2	0.2	0.2	0.3
Livestock[3]	21,659	16,493	12,239	10,929	9,238	33.3	34.7	37.1	36.5	36.9
Foods[3]	20,672	15,425	11,066	9,585	7,732	31.8	32.5	33.5	32.0	30.9
Dairy products and honey[3]	4,435	4,414	3,536	2,739	2,173	6.8	9.3	10.7	9.1	8.7
Meat animals[3]	12,815	8,588	6,129	5,672	4,695	19.7	18.1	18.6	18.9	18.7
Poultry and eggs[3]	3,422	2,423	1,401	1,174	864	5.3	5.1	4.2	3.9	3.4
Nonfoods[3]	987	1,068	1,173	1,344	1,506	1.5	2.2	3.6	4.5	6.0
Mohair and shorn wool[3]	370	384	240	217	189	0.6	0.8	0.7	0.7	0.8
Silk	23	32	260	231	92	0.0	0.1	0.8	0.8	0.4
Other livestock products for nonfood use[3]	594	652	673	896	1,225	0.9	1.4	2.0	3.0	4.9
FISHERY AND WILDLIFE PRODUCTS[3]	1,243	787	418	316	294	1.9	1.7	1.3	1.1	1.2
Fishery products[3]	1,116	642	292	242	222	1.7	1.4	0.9	0.8	0.9
Foods[3]	949	567	251	203	189	1.5	1.2	0.8	0.8	0.8
Nonfoods[3]	168	75	41	39	22	0.3	0.2	0.1	0.1	0.1
Wildlife products[3]	127	145	126	75	73	0.2	0.3	0.4	0.3	0.3
FOREST PRODUCTS[3]	3,549	3,275	2,619	3,011	3,343	5.5	6.9	7.9	10.1	13.3
Sawlogs	1,972	1,924	1,275	1,732	2,119	3.0	4.1	3.9	5.8	8.5
Pulpwood	883	574	268	146	66	1.4	1.2	0.8	0.5	0.3
Veneer logs	243	155	63	(4)	(4)	0.4	0.3	0.2	(4)	(4)
MINERALS, EXCEPT GOLD[3]	26,233	16,081	7,823	6,508	4,087	40.4	33.9	23.7	21.7	16.3
All metals, except gold[3]	3,721	2,859	1,082	1,112	834	5.7	6.0	3.3	3.7	3.3
Iron and ferroalloy ores	1,739	1,305	464	510	449	2.7	2.7	1.4	1.7	1.8
Iron	1,293	898	334	454	420	2.0	1.9	1.0	1.5	1.7
Mangenese	94	82	31	29	16	0.1	0.2	0.1	0.1	0.1
Tungsten	21	66	14	5	4	(Z)	0.1	(Z)	(Z)	(Z)
Chromium	25	22	5	2	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)
Cobalt	25	26	2	(Z)	(Z)	(Z)	0.1	(Z)	(Z)	(Z)
Molybdenum	83	64	18	(Z)	(Z)	0.1	0.1	0.1	(Z)	(Z)
Nickel	198	147	60	20	9	0.3	0.3	0.2	0.1	(Z)
Other metal ores[3]	1,982	1,554	618	602	385	3.0	3.3	1.9	2.0	1.5
Silver	215	139	32	37	40	0.3	0.3	0.1	0.1	0.2
Copper	703	599	224	222	140	1.1	1.3	0.7	0.7	0.6
Lead	111	123	63	82	55	0.2	0.3	0.2	0.3	0.2
Zinc	185	155	86	66	36	0.3	0.3	0.3	0.2	0.1
Bauxite	156	67	7	6	1	0.2	0.1	(Z)	(Z)	(Z)
Mercury	22	37	14	12	9	(Z)	0.1	(Z)	(Z)	(Z)
Antimony	8	7	5	6	3	(Z)	(Z)	(Z)	(Z)	(Z)
Cadmium	30	24	12	1	(Z)	(Z)	0.1	(Z)	(Z)	(Z)
Magnesium	55	46	1	1	(Z)	0.1	0.1	(Z)	(Z)	(Z)
Tin	113	210	154	156	94	0.2	0.4	0.5	0.5	0.4
Uranium and vanadium	102	(4)	(4)	(4)	(4)	0.2	(4)	(4)	(4)	(4)

See footnotes at end of table.

TABLE B2. Raw Materials Represented in the Price Indexes—Continued

Materials group or material[1]	Avorage annual value of consumption									
	Millions of 1967 dollars[2]					Percent of all raw materials represented				
	1965-1969	1950-1954	1935-1939	1920-1924	1905-1909	1965-1969	1950-1954	1935-1939	1920 1924	1905-1909
Mineral fuels	18,401	11,096	5,858	4,627	2,592	28.3	23.4	17.7	15.5	10.3
Coal	2,387	2,285	2,222	2,820	2,199	3.7	4.8	6.7	9.4	8.8
Authracite	94	268	402	630	618	0.1	0.6	1.2	2.1	2.5
Bituminous coal and lignite	2,293	2,017	1,820	2,190	1,581	3.5	4.2	5.5	7.3	6.3
Oil and gas	16,014	8,811	3,636	1,807	393	24.6	18.6	11.0	6.0	1.6
Crude petroleum	11,694	7,009	3,128	1,621	326	18.0	14.8	9.5	5.4	1.3
Natural gas	3,156	1,268	371	143	67	4.9	2.7	1.1	0.5	0.3
Natural gas liquids:										
Natural gasoline	548	346	126	43	(Z)	0.8	0.7	0.4	0.1	(Z)
Liquified petroleum gases	616	188	11	(Z)	(Z)	0.9	0.4	(Z)	(Z)	(Z)
Construction materials[3]	2,567	1,340	609	570	546	3.9	2.8	1.8	1.9	2.2
Dimension stone:										
Limestone	18	28	25	34	77	(Z)	0.1	0.1	0.1	0.3
Granite	44	38	40	78	89	0.1	0.1	0.1	0.3	0.4
Slate	12	10	9	13	28	(Z)	(Z)	(Z)	(Z)	0.1
Marble	34	20	22	55	69	0.1	(Z)	0.1	0.2	0.3
Trap rock	(Z)	1	1	1	3	(Z)	(Z)	(Z)	(Z)	(Z)
Sandstone	11	10	5	19	64	(Z)	(Z)	(Z)	0.1	0.3
Miscellaneous stone	5	1	1	1	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)
Crushed and broken stone:										
For cement manufacture	113	72	31	34	15	0.2	0.2	0.1	0.1	0.1
For lime manufacture	47	22	10	9	8	0.1	(Z)	(Z)	(Z)	(Z)
Slate	5	3	2	2	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)
All other stone	1,042	441	189	126	85	1.6	0.9	0.5	0.4	0.3
Sand and gravel	998	477	199	123	43	1.5	1.0	0.6	0.4	0.2
Fire clay	42	55	22	11	8	0.1	0.1	0.1	(Z)	(Z)
Magnesite	2	2	1	1	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)
Common clay and shale	53	36	15	31	43	0.1	0.1	(Z)	0.1	0.2
Gypsum	56	43	13	15	7	0.1	0.1	(Z)	0.1	(Z)
Native asphalt and bitumens	8	7	2	2	1	(Z)	(Z)	(Z)	(Z)	(Z)
Asbestos	72	69	22	14	5	0.1	0.1	0.1	(Z)	(Z)
Other nonmetallic minerals[3]	1,544	786	274	199	115	2.4	1.7	0.8	0.7	0.5
Chemical and fertilizer minerals[3]	1,222	572	205	141	76	1.9	1.2	0.6	0.5	0.3
Barite	33	22	7	4	2	0.1	(Z)	(Z)	(Z)	(Z)
Fluorspar	55	25	7	6	3	0.1	0.1	(Z)	(Z)	(Z)
Potash	131	55	14	7	5	0.2	0.1	(Z)	(Z)	(Z)
Phosphate rock	155	74	18	16	9	0.2	0.2	0.1	0.1	(Z)
Salt	262	124	54	42	27	0.4	0.3	0.2	0.1	0.1
Sulfur and pyrites	314	176	71	56	18	0.5	0.4	0.2	0.2	0.1
Abrasives and miscellaneous minerals[3]	322	214	69	58	39	0.5	0.5	0.2	0.2	0.2
Fuller's earth	20	11	5	4	1	(Z)	(Z)	(Z)	(Z)	(Z)
High grade clay	114	62	21	20	12	0.2	0.1	0.1	0.1	(Z)
Feldspar	10	6	4	3	1	(Z)	(Z)	(Z)	(Z)	(Z)
Mica sheet	10	20	6	5	4	(Z)	(Z)	(Z)	(Z)	(Z)
Mica scrap	2	2	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)
Talc and soapstone	22	14	5	5	2	(Z)	(Z)	(Z)	(Z)	(Z)
Diamonds:										
Cut, not set	21	12	11	11	8	(Z)	(Z)	(Z)	(Z)	(Z)
Rough or uncut	27	4	1	2	4	(Z)	(Z)	(Z)	(Z)	(Z)
Industrial	35	45	6	1	(Z)	0.1	0.1	(Z)	(Z)	(Z)

Z Less than $500 thousand or, in the percent column, less than 0.05 percent.

[1] For each materials line shown, a separate price series is used in construction of the price indexes.

[2] Represents the weights used in constructing the price indexes.

[3] Represents the total for the group, including matcrials not represented by individually associated price series. For forest products and minerals, the extent to which commodities of a group are represented by individually associated price series can be determined by compairing the sum of the detail shown for the group with the total for the group. For certain domestic agricultural materials, fishery products, and wildlife products, such comparisons have been made for selected periods. For agricultural products, these comparisons used domestic production as weights. For fishery and wildlife products the weights were approximate consumption. The percent coverage measures are:

Material	1971-1973	1967	1937-1941	1924-1929
All domestic farm products	91.4	92.2	92.4	93.4
Crop	84.6	84.5	83.5	88.2
Food grains	99.1	100.0	99.7	99.5
Feed grains	100.0	100.0	(NA)	(NA)
Oil bearing crops	99.9	99.9	100.0	96.7
Fruit	56.1	83.9	67.7	82.6
Commercial vegetables	82.7	81.4	81.4	83.9
Potatoes, sweet potatoes, and dry beans	98.1	97.5	97.7	100.0
Cotton	98.8	100.0	(NA)	(NA)
Tobacco	100.0	100.0	(NA)	(NA)
Livestock	96.8	98.1	98.9	98.3
Dairy products	96.9	97.2	(NA)	(NA)
Meat animals	98.6	100.0	(NA)	(NA)
Poultry and eggs	95.7	99.2	100.0	94.6
Wool	-	100.0	91.9	100.0
Fishery products	78.8	76.9	(4)	(4)
Foods	90.9	95.1	(4)	(4)
Nonfoods	17.1	5.2	(4)	(4)
Wildlife products	92.6	89.5	(4)	(4)

(NA) Not available separately.

[4] An individually associated price series was not used for this period. For fishery products, the series begins in 1939.

TABLE B3. Domestic Agricultural, Fishery, and Wildlife Materials Included in the Price Indexes

Materials group and material	Value of material as percent of value of all materials consumed represented in price indexes in	
	1967	1935 to 1939
AGRICULTURAL MATERIALS		
Crops:		
Food grains:		
Wheat	1.1	2.1
Rye	(Z)	(Z)
Rice	0.1	0.1
Feed grains and hay:		
Corn	2.1	2.0
Oats	0.3	0.3
Barley	0.3	0.2
Grain sorghums	0.1	(Z)
Hay	0.1	0.1
Fruit:		
Apples	0.5	0.7
Grapes	0.3	(Z)
Grapefruit	0.1	0.2
Lemons	0.1	0.2
Oranges	0.6	0.7
Peaches	0.3	0.4
Pears	0.1	0.1
Strawberries	0.2	0.4
Tangerines	(Z)	(Z)
Potatoes, sweet potatoes, and dry edible beans:		
Potatoes	0.7	1.0
Sweet potatoes	0.1	0.2
Beans, dry edible	0.2	0.3
Commercial vegetables for fresh market:		
Asparagus	0.1	(Z)
Beans, snap	0.2	0.4
Broccoli	(Z)	0.1
Cabbage	0.1	0.3
Cantaloupe	0.1	0.3
Carrots	0.1	0.3
Cauliflower	(Z)	0.1
Celery	0.1	0.3
Cucumber	0.1	0.2
Lettuce	0.4	0.6
Onions	0.2	0.4
Peppers, green	0.1	0.2
Sweet corn	0.2	0.3
Spinach	(Z)	0.1
Tomatoes	0.7	0.8
Watermelons	0.1	0.2
Oil bearing crops:		
Cottonseed	0.2	0.2
Peanuts	0.4	0.4
Flaxseed	0.1	0.3
Soybeans	1.0	0.4
Cotton	1.5	2.3
Tobacco	1.5	2.0

Materials group and material	Value of material as percent of value of all materials consumed represented in price indexes in	
	1967	1935 to 1939
AGRICULTURAL MATERIALS--Continued		
Livestock:		
Dairy products:		
Milk, wholesale	6.6	6.2
Milk, retail	0.3	2.4
Butterfat in cream	0.1	2.8
Meat animals:		
Beef cattle	14.4	9.4
Calves		1.3
Hogs	5.4	7.6
Sheep	0.5	0.2
Lambs		1.3
Poultry and eggs:		
Eggs	2.8	2.7
Chickens	2.0	1.3
Turkeys	0.7	0.4
Wool	0.6	0.8
FISHERY PRODUCTS		
Foods:		
Finfish:		
Cod	0.08	(1)
Haddock	0.06	(1)
Flounder	0.04	(1)
Ocean perch	(Z)	(1)
Pollock	(Z)	(1)
Whiting	(Z)	(1)
Red snapper	0.01	(1)
Pacific halibut	0.03	(1)
Salmon	0.06	(1)
Tuna	0.17	(1)
Shellfish:		
Shrimp	0.47	(1)
Clams	0.04	(1)
Crabs	0.06	(1)
Lobsters	0.20	(1)
Eastern oysters	0.07	(1)
Sea scallops	0.03	(1)
Nonfoods:		
Menhaden	0.03	(1)
WILDLIFE PRODUCTS		
Beaver	(Z)	(1)
Coyotte and wolf	(Z)	(1)
Fox	0.01	(1)
Lynx	(Z)	(1)
Marten	(Z)	(1)
Mink	0.10	(1)
Opossum	(Z)	(1)
Otter	(Z)	(1)
Persian lamb	(Z)	(1)
Rabbit	(Z)	(1)
Hare	(Z)	(1)
Sable	(Z)	(1)
Racoon	0.01	(1)

(Z) Less than 0.05 percent for agricultural materials; less than 0.005 for fishery and wildlife products.
[1]An individually associated price index was not available for fishery products prior to 1939 and for wildlife products prior to 1967.

TABLE B4. Comparison of Segment Price Indexes at the Splicing Points

Item	Indexes on 1950-54 and 1965-69 weight bases (1950 = 100.0)		Indexes on 1935-39 and 1950-54 weight bases (1944 = 100.0)		Indexes on 1920-24 and 1935-39 weight bases (1929 = 100.0)		Indexes on 1905-09 and 1920-24 weight bases (1914 = 100.0)	
	1960	1958	1945	1943	1930	1928	1915	1913
ALL RAW MATERIALS, EXCEPT GOLD:								
Early weight base[1]	99.7	102.3	103.9	98.7	87.1	99.6	96.5	102.5
Later weight base[2]	99.6	102.7	103.5	99.0	83.7	100.2	96.7	103.3
Agricultural materials:								
Early weight base[1]	99.5	105.2	104.4	99.4	85.1	100.2	95.4	101.1
Later weight base[2]	99.3	105.4	104.7	99.5	81.0	101.3	95.4	101.7
Crops:								
Early weight base[1]	100.8	104.2	101.1	97.8	86.1	106.0	97.0	106.1
Later weight base[2]	99.8	104.0	101.0	97.3	84.5	106.1	97.3	108.1
Foods:								
Early weight base[1]	102.1	108.1	100.7	99.2	88.5	106.8	99.1	104.9
Later weight base[2]	100.8	107.3	100.6	98.7	88.0	107.0	98.7	106.6
Nonfoods:								
Early weight base[1]	97.9	95.5	102.3	93.7	76.2	102.8	88.8	110.7
Later weight base[2]	97.2	95.6	102.3	93.4	74.4	103.5	92.3	113.7
Livestock:								
Early weight base[1]	98.7	105.8	107.1	100.8	84.6	97.5	94.6	98.5
Later weight base[2]	99.0	106.2	107.4	101.1	77.9	97.8	94.5	98.4
Foods:								
Early weight base[1]	98.6	106.0	107.3	100.8	85.1	97.1	94.3	98.6
Later weight base[2]	98.9	106.4	107.5	101.0	78.1	97.2	94.1	98.4
Nonfoods:								
Early weight base[1]	101.8	102.0	105.9	100.6	79.1	102.1	99.0	96.9
Later weight base[2]	101.6	101.1	104.9	102.8	76.0	103.1	98.3	97.1
Fishery products:								
Early weight base[1]	90.3	105.6	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Later weight base[2]	89.7	105.6	115.3	112.0	(NA)	(NA)	(NA)	(NA)
Wildlife products:								
Early weight base[1]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Later weight base[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Forest products:								
Early weight base[1]	96.3	94.0	101.1	92.6	91.7	96.7	97.7	108.0
Later weight base[2]	95.9	95.2	101.1	92.7	92.3	97.1	97.6	107.9
Minerals, except gold:								
Early weight base[1]	100.7	99.9	101.2	96.4	92.8	98.3	100.5	105.1
Later weight base[2]	100.8	100.2	100.7	98.3	91.4	97.5	101.5	108.4
All metals, except gold:								
Early weight base[1]	100.9	94.9	101.2	104.6	83.2	93.8	118.4	116.6
Later weight base[2]	101.0	94.8	101.8	104.1	82.0	92.2	128.4	115.9
Iron and ferroalloy ores:								
Early weight base[1]	98.8	99.4	101.9	109.0	98.7	94.5	102.3	117.4
Later weight base[2]	98.5	98.5	101.4	107.1	98.0	95.1	105.2	115.6
Other metal ores:								
Early weight base[1]	102.9	90.7	100.7	101.8	73.5	93.3	135.8	115.7
Later weight base[2]	103.5	90.9	102.2	101.6	73.4	90.6	141.3	116.0
Mineral fuels:								
Early weight base[1]	100.7	101.5	102.3	95.7	95.1	99.3	94.9	103.6
Later weight base[2]	100.7	101.6	100.8	97.2	94.0	97.9	90.6	107.7
Coal:								
Early weight base[1]	97.8	102.4	105.0	91.9	96.3	103.0	97.6	101.5
Later weight base[2]	98.2	102.1	104.9	92.0	96.1	103.4	97.3	101.4
Oil and gas:								
Early weight base[1]	101.3	101.3	100.1	99.1	93.4	93.8	82.5	113.6
Later weight base[2]	101.1	101.5	99.5	98.9	93.0	95.0	81.9	115.7
Construction materials:								
Early weight base[1]	100.6	97.7	100.1	96.5	97.3	100.3	100.9	100.7
Later weight base[2]	100.3	97.9	101.2	97.8	93.1	103.2	100.0	101.5
Other nonmetallic minerals:								
Early weight base[1]	100.4	99.4	84.0	85.1	95.0	100.9	121.1	96.7
Later weight base[2]	102.6	99.5	96.0	94.8	76.1	96.5	112.1	93.2
Chemical and fertilizer minerals:								
Early weight base[1]	100.7	102.8	101.9	98.5	99.3	100.9	120.8	100.4
Later weight base[2]	101.6	102.6	101.9	98.2	99.4	101.0	108.5	99.5
Abrasives and miscellaneous minerals:								
Early weight base[1]	99.7	92.0	62.6	69.3	84.9	100.7	121.7	89.9
Later weight base[2]	104.6	92.8	80.9	86.0	50.7	91.5	120.8	78.2

[1]For the years 1913, 1914, and 1915 represents the base 1905 to 1909; for years 1928, 1929, and 1930 represents 1920 to 1924; for years 1943, 1944, and 1945 represents 1935 to 1939; and for years 1958, 1959, and 1960 represents 1950 to 1954.

[2]For the years 1913, 1914, and 1915 represents the base 1920 to 1924; for years 1928, 1929, and 1930 represents 1935 to 1939; for years 1943, 1944, and 1945 represents 1950 to 1954; and for years 1958, 1959, and 1960 represents 1965 to 1969.

TABLE B5. Comparison of Changing Weight and Constant Weight Price Indexes for Selected Years

(1972 = 100.0)

Item	1960	1950	1940	1930	1920	1910	1900
ALL RAW MATERIALS, EXCEPT GOLD:							
Changing weight base[1]	74.8	72.7	30.3	36.5	65.4	29.3	26.8
Constant weight base[2]	74.8	71.2	27.9	31.8	53.4	25.0	18.0
Agricultural materials:							
Changing weight base[1]	72.4	77.6	30.4	36.3	57.3	30.6	19.5
Constant weight base[2]	72.4	80.7	30.8	38.1	60.5	33.6	21.2
Crops:							
Changing weight base[1]	79.8	82.5	32.2	41.2	74.0	37.4	22.4
Constant weight base[2]	79.8	88.4	32.3	40.6	74.4	44.1	26.5
Foods:							
Changing weight base[1]	77.1	79.5	32.4	43.2	73.9	37.1	21.7
Constant weight base[2]	77.1	85.9	31.9	41.5	71.3	35.5	21.7
Nonfoods:							
Changing weight base[1]	88.1	91.6	32.0	36.1	76.1	39.5	25.9
Constant weight base[2]	88.1	95.8	33.5	37.8	83.7	70.0	41.1
Livestock:							
Changing weight base[1]	68.7	75.4	29.9	33.7	50.4	27.8	18.3
Constant weight base[2]	68.7	76.9	30.1	36.9	53.6	28.4	18.6
Foods:							
Changing weight base[1]	68.3	74.4	29.3	33.0	49.0	27.0	17.7
Constant weight base[2]	68.3	76.0	29.7	36.9	53.5	28.2	18.4
Nonfoods:							
Changing weight base[1]	77.4	95.7	38.7	43.7	71.4	38.7	27.4
Constant weight base[2]	77.4	98.1	38.6	37.0	57.0	32.0	21.0
Fishery products:							
Changing weight base[1]	49.4	47.5	16.5	(NA)	(NA)	(NA)	(NA)
Constant weight base[2]	49.4	47.4	16.4	(NA)	(NA)	(NA)	(NA)
Wildlife products:							
Changing weight base[1]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Constant weight base[2]	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Forest products:							
Changing weight base[1]	67.7	62.5	21.1	17.4	35.4	10.4	8.3
Constant weight base[2]	67.7	63.1	22.9	18.8	44.3	12.7	12.0
Minerals, except gold:							
Changing weight base[1]	80.1	64.5	29.7	32.7	60.9	21.5	22.1
Constant weight base[2]	80.1	64.5	31.3	37.4	76.2	26.4	36.9
All metals, except gold:							
Changing weight base[1]	69.6	51.2	29.7	27.0	39.6	27.8	28.1
Constant weight base[2]	69.6	51.3	30.5	29.2	46.5	30.8	32.2
Iron and ferroalloy ores:							
Changing weight base[1]	72.2	49.4	29.8	28.1	40.0	26.0	25.6
Constant weight base[2]	72.2	48.7	29.6	28.0	38.8	25.6	24.8
Other metal ores:							
Changing weight base[1]	67.0	52.5	29.5	26.3	38.6	26.3	27.6
Constant weight base[2]	67.0	53.6	31.4	30.4	53.6	35.7	39.0
Mineral fuels:							
Changing weight base[1]	80.2	66.5	27.8	31.2	65.2	18.4	18.9
Constant weight base[2]	80.2	66.2	28.5	35.2	81.0	21.3	35.5
Coal:							
Changing weight base[1]	61.4	63.8	25.7	24.6	44.3	13.9	12.3
Constant weight base[2]	61.4	63.6	25.2	22.9	48.7	14.6	13.6
Oil and gas:							
Changing weight base[1]	84.2	66.2	29.7	36.8	91.5	20.0	36.7
Constant weight base[2]	84.2	66.8	29.2	37.8	87.8	22.7	40.1
Construction materials:							
Changing weight base[1]	79.4	65.6	37.5	45.1	59.4	22.4	22.6
Constant weight base[2]	79.4	66.5	41.3	47.8	71.2	46.6	41.7
Other nonmetallic minerals:							
Changing weight base[1]	114.0	78.8	44.9	56.8	96.0	54.3	66.0
Constant weight base[2]	114.0	75.1	55.9	75.6	104.9	49.9	62.7
Chemical and fertilizer minerals:							
Changing weight base[1]	102.0	76.4	56.8	67.2	87.5	54.7	71.3
Constant weight base[2]	102.0	79.2	59.5	75.2	110.2	55.8	72.9
Abrasives and miscellaneous minerals:							
Changing weight base[1]	150.6	85.4	31.2	46.4	116.0	52.9	53.4
Constant weight base[2]	150.6	62.8	45.0	77.1	88.7	32.2	31.4

(NA) Not available.

[1]Represents the indexes shown in table B1. For 1960, the weight base is 1965 to 1969; for 1950, the weight base is 1950 to 1954; for 1940 and 1930, the weight base is 1935 to 1939; for 1920, the weight base is 1920 to 1924; for 1910 and 1900, the weight base is 1905 to 1909.

[2]The all years, the weight base is 1965 to 1969.

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